304

CAA AAT GAG GTT TTT GGA AAA GAG TTG TTC AAA GTT CTG AAA CAA AAT Gln Asn Glu Val Phe Gly Lys Glu Leu Phe Lys Val Leu Lys Gln Asn 60



09	112	160	208	256
AAATCCTCCA CTCATACACT CCACTTCTCT CTCTCTCT	GTAGCAAACT TAAAAGAAA ATG GAA ATG GGA AGC ATT TTA GAG TTT CTT	GAT AAC AAA GCC AFT FIG GTC ACT GGT GCT ACT GGC TCC FTA GCA AAA	ATT TTT GTG GAG AAG GTA CTG AGG AGT CAA CCG AAT GTG AAG AAA CTC	TAT CTT CTT TTG AGA GCA ACC GAT GAC GAG ACA GCT GCT CTA CGC TTG
	Met Glu Met Gly Ser ile Leu Glu Phe Leu	Asp Asn Lys Ala Ile Leu Val Thr Gly Ala Thr Gly Ser Leu Ala Lys	Ile Phe Val Glu Lys Val Léu Arg Ser Gln Pro Asn Val Lys Lys Leu	Tyr Leu Leu Leu Arg Ala Thr Asp Asp Glu Thr Ala Ala Leu Arg Leu
	1	15	30	45

352	400	448	496	544	592
TTA GGT GCA AAT TTC TAT TCC TTT GTA TCA GAA AAA GTG ACT GTA GTA Leu Gly Ala Asn Phe Tyr Ser Phe Val Ser Glu Lys Val Thr Val Val 80	CCC GGT GAT ATT ACT GGT GAA GAC TTG TGT CTC AAA GAC GTC AAT TTG 4 Pro Gly Asp Ile Thr Gly Glu Asp Leu Cys Leu Lys Asp Val Asn Leu 100	AAG GAA GAA ATG TGG AGG GAA ATC GAT GTT GTT GTC AAT CTA GCT GCT Lys Glu Glu Met Trp Arg Glu Ile Asp Val Val Val Asn Leu Ala Ala 110	ACA ATC AAC TTC ATT GAA AGG TAC GAC GTG TCT CTG CTT ATC AAC ACA Thr Ile Asn Phe Ile Glu Arg Tyr Asp Val Ser Leu Leu Ile Asn Thr 125	TAT GGA GCC AAG TAT GTT TTG GAC TTC GCG AAG AAG TGC AAC AAA TTA 5 Tyr Gly Ala Lys Tyr Val Leu Asp Phe Ala Lys Lys Cys Asn Lys Leu 140	AAG ATA TTT GTT CAT GTA TCT ACT GCT TAT GTA TCT GGA GAG AAA AAT Lys Ile Phe Val His Val Ser Thr Ala Tyr Val Ser Gly Glu Lys Asn 160
НП	Ощ	A; H	K, T	н н н	K H

640	688	736	784	832	880
ATA CTG GAG AAG CCT TAT TAT ATG GGC GAG TCA CTT AAT GGA 640 Ile Leu Glu Lys Pro Tyr Tyr Met Gly Glu Ser Leu Asn Gly 175 180	GGT CTG GAC ATT AAT GTA GAG AAG AAA CTT GTG GAG GCA AAA 688 Gly Leu Asp Ile Asn Val Glu Lys Lys Leu Val Glu Ala Lys 190	GAA CTT CAA GCA GCG GCA ACG GAA AAG TCC ATT AAA TCG 736 Glu Leu Gln Ala Ala Gly Ala Thr Glu Lys Ser Ile Lys Ser 210	AAG GAC ATG GGC ATC GAG AGG GCA AGA CAC TGG GGA TGG CCA 784 Lys Asp Met Gly Ile Glu Arg Ala Arg His Trp Gly Trp Pro 225	TAT GTA TTC ACC AAG GCA TTA GGG GAG ATG CTT TTG ATG CAA 832 Tyr Val Phe Thr Lys Ala Leu Gly Glu Met Leu Leu Met Gln 240	GGG GAC ATT CCG CTT ACT ATT ATT CGT CCC ACC ATC ATC ACC 880 Gly Asp ile Pro Leu Thr ile ile Arg Pro Thr ile ile Thr 255
GGG TTA Gly Leu	AGA TTA Arg Leu	ATC AAT Ile Asn 205	ACA ATG Thr Met 220	AAT GTG Asn Val	TAC AAA Tyr Lys

FIG. 1C

928	976	1024	1072	1120	1168
GTC AGG ACC Val Arg Thr	AGG TGT ATG Arg Cys Met	GAT ATG GTC Asp Met Val 315	CAA AGA TAC Gln Arg Tyr 330	AAT CCA ATG Asn Pro Met 345	ACC AAG AAT Thr Lys Asn
GAA GGT Glu Gly 280	AGA TTG Arg Leu 295	CCG GCA Pro Ala	GCA AAC Ala Asn	GCG GCG Ala Ala	TAC TTC Tyr Phe 360
T TGG GTT Y Trp Val	T AAA GGG Y Lys Gly	C CTG ATA p Leu Ile 310	G GCG CAC 1 Ala His 325	A TCT TCA Y Ser Ser 0	A CAC CGT a His Arg
TTT CCT GGT Phe Pro Gly 275	TAT TAT GGT Tyr Tyr Gly 290	ATA ATT GAC Ile Ile Asp	GCC ATG GTG Ala Met Val	CAT GTG GGA His Val Gly 340	GAG ATG GCA Glu Met Ala 355
GAG CCC Glu Pro	CCT GTA Pro Val	AGC ACA Ser Thr 305	ATA GTA Ile Val 320	ACA TAC Thr Tyr	TTA CCA Leu Pro
ACT TTT AAA Thr Phe Lys 270	GAT AAT GTA Asp Asn Val 285	TGC GGA CCC Cys Gly Pro	AAT GCA ACG Asn Ala Thr	GAG CCG GTG Glu Pro Val 335	CTG AGT GCA Leu Ser Ala 350
AGC AC Ser Th	ATC GZ Ile AS 28	CTT TC Leu Cy 300	GTG AZ Val As	GTA G2 Val G1	AAA CI Lys Le

FIG. 1D

1216	1264	1312	1360	1408	1456
CCG GAT CGC AAC CCA GTA CAT GTG GGT CGG GCT ATG 1216 Pro Asp Arg Asn Pro Val His Val Gly Arg Ala Met 370	TTC TCC ACC TTC CAC CTT TAT CTC ACC CTT AAT TTC 1264 Phe Ser Thr Phe His Leu Tyr Leu Thr Leu Asn Phe 385	AAG GTA CTG GAG ATA GCA AAT ACA ATA TTC TGC CAA 1312 Lys Val Leu Glu Ile Ala Asn Thr Ile Phe Cys Gln 400	AAG TAC ATG GAT CTT AAA AGG AAG ACG AGG TTG TTG 1360 Lys Tyr Met Asp Leu Lys Arg Lys Thr Arg Leu Leu 420	GAC ATT TAT AAA CCC TAC CTC TTC TTC CAA GGC ATC 1408 ASP Ile Tyr Lys Pro Tyr Leu Phe Phe Gln Gly Ile 435	AAC ACT GAG AAG TTG CGG ATT GCT GCA AAA GAA AGC 1456 Asn Thr Glu Lys Leu Arg Ile Ala Ala Lys Glu Ser 450
TGG ATC AAC Trp Ile Asn 365	TTC TCC TCC Phe Ser Ser	CTT CCT TTG Leu Pro Leu	TTC AAG GGT Phe Lys Gly 415	CGT TTA GTA Arg Leu Val 430	GAT GAC ATG Asp Asp Met 445
CCA Pro	GTC Val 380	CTC	TGG	TTG	TTT Phe

FIG. 1E

1504	1552	1608	1668	1728	1786
ATA GTT GAA GCT GAT ATG TTT TAC TTT GAT CCC AGG GCA ATT AAC TGG 150 Ile Val Glu Ala Asp Met Phe Tyr Phe Asp Pro Arg Ala Ile Asn Trp 460	GAA GAT TAC TTC TTG AAA ACT CAT TTC CCA GGN GTC GTA GAG CAC GTT 159 Glu Asp Tyr Phe Leu Lys Thr His Phe Pro Gly Val Val Glu His Val 480	CTT AAC TAAAAGTTAC GGTACGAAAA TGAGAAGATT GGAATGCATG CACCGAAAGN 160 Leu Asn	NCAACATAAA AGACGTGGTT AAAGTCATGG TCAAAAAAGA AATAAAATGC AGTTAGGTTT 16	STGTTGCAGT TTTGATTCCT TGTATTGTTA CTTGTACTTT TGATCTTTTT CTTTTTAAT 173	GAAATTICIC ICTITGITIT GIGAAAAAA AAAAAAAA GAGCICCIGC AGAAGCIT 17

56	104	152	200	248	296
GGAACTCCAT CCCTTCCTCC CTCACTCCTC TCTCTACA ATG AAG GCC AAA ACA ATC Met Lys Ala Lys Thr Ile 1	ACA AAC CCG GAG ATC CAA GTC TCC ACG ACC ATG ACC ACC ACG ACC ACG Thr Asn Pro Glu Ile Gln Val Ser Thr Thr Met Thr Thr Thr Thr Thr Thr 10 10	ACT ATG ACC GCC ACT CTC CCC AAC TTC AAG TCC TCC ATC AAC TTA CAC Thr Met Thr Ala Thr Leu Pro Asn Phe Lys Ser Ser Ile Asn Leu His 25 35	CAC GTC AAG CTC GGC TAC CAC TAC TTA ATC TCC AAT GCC CTC TTC CTC His Val Lys Leu Gly Tyr His Tyr Leu Ile Ser Asn Ala Leu Phe Leu 40 50	GTA TTC ATC CCC CTT TTG GGC CTC GCT TCG GCC CAT CTC TCC TCC TTC Val Phe Ile Pro Leu Leu Gly Leu Ala Ser Ala His Leu Ser Ser Phe 55	TCG GCC CAT GAC TTG TCC CTG CTC TTC GAC CTC CTT CGC CGC AAC CTC Ser Ala His Asp Leu Ser Leu Leu Phe Asp Leu Leu Arg Arg Asn Leu 75

FIG. 2A

344	392	440	488	536	584
A TTA GCA ACC CTA	GAC TTT GGA TGC	3 ATG TTC ATG GAC	r Arr GAG rrr CAG	A ACC TAT GTC CCC	A GCA GCA GCC AGG
1 Leu Ala Thr Leu	1 Asp Phe Gly Cys	1 Met Phe Met Asp	n Ile Glu Phe Gln	u Thr Tyr Val Pro	e Ala Ala Ala Arg
100	115	0	150	165	180
TTC CTC TTC GTT TTA	AAT GTC TAC TTG GTG	ATG ACA TCC CAC GAG	TTT TCT AAG GAG AAT	GGT ATG GGT CGG GAA	GCC GAG CCG AGC ATA
Phe Leu Phe Val Leu	Asn Val Tyr Leu Val	Met Thr Ser His Glu	Phe Ser Lys Glu Asn	Gly Met Gly Arg Glu	Ala Glu Pro Ser Ile
95	110	130	145	160	175
CTC CCT GTT GTC GTT TGT TCT 1 Leu Pro Val Val Val Cys Ser I 90	CAT TTC TTG ACC CGG CCC AGG A His Phe Leu Thr Arg Pro Arg 2	TAT AAG CCT CAA CCG AAC CTG 1 Tyr Lys Pro Gln Pro Asn Leu 1 120	CGG ACC TCC CGG GCC GGG TCG : Arg Thr Ser Arg Ala Gly Ser 1 135	AGG AAG ATC TTG GAG AGG GCC ( Arg Lys Ile Leu Glu Arg Ala ( 155	GAA TCC GTC ACT AAG GTG CCC (Glu Ser Val Thr Lys Val Pro 170

632	680	728	776	824	872
GAG Glu	TGC Cys	CAT His 230	$_{\rm G1y}^{\rm GGT}$	CAG Gln	ATĞ Met
TTG	ANC	AAC Asn	ATG Met 245	CTA Leu	AAC Asn
GTG Val	GTG Val	GTT Val	GGC Gly	CTC Leu 260	GAA Glu
GAG Glu 195	GTG Val	ATA	GGT Gly	GAC Asp	ACG Thr 275
GAC Asp	CTG Leu 210	ATG Met	CTT Leu	AAG Lys	AGC Ser
ATC Ile	ATA Ile	TCC Ser 225	AAT Asn	GCC Ala	GTG Val
GCG Ala	GGA Gly	TCA Ser	TAT Tyr 240	CTT Leu	GTA Val
GGG G1y	ATA Ile	CTG	AGC Ser	GAT ASP 255	TTA Leu
TAC TYr 190	CAG Gln	TCG Ser	CTT Leu	ATT Ile	GTG Val 270
ATG Met	AAG Lys 205	CCG	ATA Ile	TCC	TAT Tyr
GTG Val	CCG	ACG Thr 220	AAT	ATT Ile	ACA Thr
GAG Glu	AAG Lys	CCA	GGT G1y 235	CTC	AAC Asn
GAG Glu	GTG Val	AAC Asn	AGG Arg	GGG G1Y 250	AAA Lys
GCG Ala 185	$^{\rm GGG}_{\rm G1Y}$	TTT Phe	CTIN	GCT Ala	CGT Arg 265
GAG Glu	ACG Thr 200	TTG Leu	AAG Lys	AGT Ser	$\mathtt{TAC}$
GCC Ala	AAG Lys	AGC Ser 215	TAC Tyr	TGC Cys	GTT Val

920	896	1016	1064	1112	1160	1208
ACC CTT AAT TGG TAC TGG GGC AAT GAC CGC TCC ATG CTT ATC ACC AAC 97 Thr Leu Asn Trp Tyr Trp Gly Asn Asp Arg Ser Met Leu Ile Thr Asn 280	TGC CTA TTT CGC ATG GGT GGC GCT GCC ATC ATC CTC TCA AAC CGC TGG SCys Leu Phe Arg Met Gly Gly Ala Ala Ile Ile Leu Ser Asn Arg Trp 300 310	CGT GAT CGT CGC CGA TCC AAG TAC CAA CTC CTT CAT ACA GTA CGC ACC 10 Arg Asp Arg Arg Ser Lys Tyr Gln Leu Leu His Thr Val Arg Thr 325	CAC AAG GGC GCT GAC GAC AAG TCC TAT AGA TGC GTC TTA CAA CAA GAA 10 His Lys Gly Ala Asp Asp Lys Ser Tyr Arg Cys Val Leu Gln Gln Glu 330	GAT GAA AAT AAC AAG GTA GGT GTT GCC TTA TCC AAG GAT CTG ATG GCA 1. Asp Glu Asn Asn Lys Val Gly Val Ala Leu Ser Lys Asp Leu Met Ala 345	GTT GCC GGT GAA GCC CTA AAG GCC AAC ATC ACG ACC CTT GGT CCC CTC 1. Val Ala Gly Glu Ala Leu Lys Ala Asn Ile Thr Thr Leu Gly Pro Leu 360	GTG CTC CCC ATG TCA GAA CAA CTC CTC TTC TTT GCC ACC TTA GTG GCA 1.3 Val Leu Pro Met Ser Glu Gln Leu Leu Phe Phe Ala Thr Leu Val Ala 375 375 380 FIG. 2D

. 1256	1304	1352	1400	1448	1496
TTC Phe	GTG Val	GAA Glu	TCA Ser	AAG Lys 470	AAC Asn
GAT ASP 405	GCA Ala	CTT Leu	AGC Ser	CGT Arg	TGT Cys 485
CCA Pro	AAA Lys 420	CAC His	AGT Ser	ATC Ile	AAG Lys
ATC Ile	GGC Gly	TGG Trp 435	TCG Ser	AGG Arg	TTC Phe
TAC	GGA Gly	CCA	ACA Thr 450	666 61y	GGT Gly
CCA	GCA Ala	ACG Thr	AAC Asn	AAA Lys 465	TCA Ser
AAG Lys 400	CAT His	TTG Leu	966 Gly	GCA Ala	GGT G1y 480
GTG Val	ATC Ile 415	GAG Glu	TTT Phe	GAA Glu	TTT Phe
AAC Asn	TGC Cys	TTG Leu 430	AGG	GCT Ala	GGA Gly
ACG Thr	TTC Phe	AAC Asn	TAT Tyr 445	TAC TYr	ATT Ile
ATG Met	GAC Asp	AAG Lys	CTG	GCA Ala 460	ATG Met
AAG Lys 395	AAC Asn	GAG Glu	ACA Thr	TTG Leu	TGG Trp 475
TTC	GCG Ala 410	CTC Leu	ATG Met	GAG Glu	ACT Thr
GTC Val	GCA Ala	GAG Glu 425	AGG Arg	TAC TYr	CGA Arg
AAG Lys	TTG Leu	GAT Asp	TCG Ser 440	TGG Trp	GAT Asp
CGT Arg	AAG Lys	TTG	CCC	TTA Leu 455	$_{\rm G1Y}$

FIG. 2E

1544	1592	1640	1700	1733
AGT GTT GTG TGG AGG GCT TTG AGG AGT GTC AAT CCG GCT AGA GAG AAG Ser Val Val Trp Arg Ala Leu Arg Ser Val Asn Pro Ala Arg Glu Lys 490	AAT CCT TGG ATG GAT GAA ATT GAG AAG TTC CCT GTC CAT GTG CCT AAA Asn Pro Trp Met Asp Glu Ile Glu Lys Phe Pro Val His Val Pro Lys 505	ATC GCA CCT ATC GCT TCG TAGAACTGCT AGGATGTGAT TAGTAATGAA Ile Ala Pro Ile Ala Ser 520	AAATGTGTAT TATGTTAGTG ATGTAGAAAA AGAAACTTTA GTTGATGGGT GAGAACATGT 1700	CTCATTGAGA ATAACGTGTG CATCGTTGTG TTG

51	6	147	195	243	291
GTCGACACA ATG AAG GCC AAA ACA ATC ACA AAC CCG GAG ATC CAA GTC TCC Met Lys Ala Lys Thr Ile Thr Asn Pro Glu Ile Gln Val Ser 1	ACG ACC ATG ACC ACG ACC GCC ACT CTC CCC AAC TTC AAG Thr Thr Thr Thr Thr Thr Thr Thr Ala Thr Leu Pro Asn Phe Lys 15	TCC TCC ATC AAC TTA CAC CAC GTC AAG CTC GGC TAC CAC TAC TTA ATC Ser Ser Ile Asn Leu His His Val Lys Leu Gly Tyr His Tyr Leu Ile 35 45	TCC AAT GCC CTC TTC CTC GTA TTC ATC CCC CTT TTG GGC CTC GCT TCG Ser Asn Ala Leu Phe Leu Val Phe Ile Pro Leu Leu Gly Leu Ala Ser 50 55	GCC CAC CTC TCC TTC TCG GCC CAT GAC TTG TCC CTG CTC TTC GAC Ala His Leu Ser Ser Phe Ser Ala His Asp Leu Ser Leu Leu Phe Asp 65	CTC CTT CGC CGC AAC CTC CTC CCC GTT GTC GTT TGT TCT TTC CTC TTC Leu Leu Arg Arg Asn Leu Leu Pro Val Val Val Cys Ser Phe Leu Phe 80

339	387	435	483	531	579
TAC Tyr 110	TCC	AAG Lys	GGC Gly	CCG	GCG Ala 190
GTC Val	ACA Thr 125	TCT Ser	ATG Met	GAG Glu	$^{\rm GGG}_{\rm G1Y}$
AAT	ATA Ile	TTT Phe 140	GGT Gly	CCC	TAC
AGG Arg	CTG	TCG Ser	GCC Ala 155	CCG	ATG Met
CCT	AAC Asn	GGG G1y	AGG Arg	GTG Val 170	GTG Val
CGG Arg 105	CCG	GCC Ala	GAG Glu	AAG Lys	GAG Glu 185
ACC Thr	CAC His 120	CGG	TTG	ACT Thr	GAG Glu
TTG	CCT	TCC Ser 135	ATC Ile	GTC Val	GCG Ala
TTC Phe	AAG Lys	ACC Thr	AAG Lys 150	TCC	GAG Glu
CAT	TAT Tyr	CGG Arg	AGG Arg	GAA Glu 165	GCC
CTA Leu 100	TGC	GAC Asp	CAG Gln	CCC	AGG Arg 180
ACC	GCC Ala 115	ATG Met	TTT Phe	GTC Val	GCC Ala
GCA Ala	TTT Phe	TTC Phe 130	GAG Glu	TAC	GCA Ala
TTA Leu	GAC Asp	ATG	ATT Ile 145	ACC Thr	GCA Ala
TTA	GTG Val	GAG Glu	AAT Asn	GAA Glu 160	ATA Ile
GTT Val 95	TTG	CAC His	GAG Glu	CGG	AGC Ser 175

FIG. 3B

627	675	723	771	819	867
GAG AAG ACG GGG GTG AAG CCG AAG CAG ATA GGA 627 Glu Lys Thr Gly Val Lys Pro Lys Gln Ile Gly 200	TGC AGC TTG TTT AAC CCA ACG CCG TCG CTG TCA 675 Cys Ser Leu Phe Asn Pro Thr Pro Ser Leu Ser 215	CAT TAC AAG CTT AGG GGT AAT ATA CTT AGC TAT 723 His Tyr Lys Leu Arg Gly Asn Ile Leu Ser Tyr 230	GGT TGC AGT GCT GGG CTC ATT TCC ATT GAT CTT 771 Gly Cys Ser Ala Gly Leu Ile Ser Ile Asp Leu 245	CAG GTT TAC CGT AAC ACA TAT GTG TTA GTA GTG 819 Gln Val Tyr Arg Asn Thr Tyr Val Leu Val Val 260	ACC CTT AAT TGG TAC TGG GGC AAT GAC CGC TCC 867 Thr Leu Asn Trp Tyr Trp Gly Asn Asp Arg Ser 280
ATC GAC GAG GTG TTG G Ile Asp Glu Val Leu G 195	ATA CTG GTG GTG AAC T Ile Leu Val Val Asn C 210	TCC ATG ATA GTT AAC C Ser Met Ile Val Asn F 225	AAT CTT GGT GGC ATG G ASn Leu Gly Gly Met G	GCC AAG GAC CTC CTA C Ala Lys Asp Leu Leu G 255	AGC ACA GAA AAC ATG A Ser Thr Glu Asn Met 1

915	963	1011	1059	1107	1155
ATC ACC AAC TGC CTA TTT CGC ATG GGT GGC GCT GCC ATC ATC Ile Thr Asn Cys Leu Phe Arg Met Gly Gly Ala Ala Ile Ile 290	AAC CGC TGG CGT GAT CGT CGC CGA TCC AAG TAC CAA CTC CTT Asn Arg Trp Arg Asp Arg Arg Ser Lys Tyr Gln Leu Leu 305	GTA CGC ACC CAC AAG GGC GCT GAC GAC AAG TCC TAT AGA TGC Val Arg Thr His Lys Gly Ala Asp Asp Lys Ser Tyr Arg Cys 325	TTA CAA CAA GAA GAT GAA AAT AAC AAG GTA GGT GTT GCC TTA TCC Leu Gln Gln Asp Glu Asn Asn Lys Val Gly Val Ala Leu Ser 340	GAT CTG ATG GCA GTT GCC GGT GAA GCC CTA AAG GCC AAC ATC ACG Asp Leu Met Ala Val Ala Gly Glu Ala Leu Lys Ala Asn Ile Thr 355	CTT GGT CCC CTC GTG CTC CCC ATG TCA GAA CAA CTC CTC TTC TTT Leu Gly Pro Leu Val Leu Pro Met Ser Glu Gln Leu Leu Phe Phe 370
ATG CTT Met Leu	CTC TCA Leu Ser	CAC ACA His Thr 320	GTC TV Val L 335	AAG G Lys A	ACC C' Thr L

1203	1251	1299	1347	1395	1443
CCA	GCA Ala	ACG Thr 430	AAC Asn	AAA Lys	TCA Ser
AAG Lys	CAT His	TTG	GGG Gly 445	GCA Ala	GGT Gly
GTG Val	ATC Ile	GAG Glu	TTT Phe	GAA Glu 460	TTT Phe
AAC Asn 395	TGC	TTG	AGG Arg	GCT Ala	GGA G1y 475
ACG Thr	TTC Phe 410	AAC Asn	TAT Tyr	TAC	ATT Ile
ATG Met	CAC His	ACG Thr 425	CTG	GCA Ala	ATG Met
AAG Lys	AAG Lys	GAG Glu	ACA Thr 440	TTG	TGG
TTC Phe	GCG Ala	CTC	ATG Met	GAG Glu 455	ACT Thr
GTC Val 390	GCA Ala	GAG Glu	AGG Arg	TAC	CGA Arg 470
AAG Lys	TTG Leu 405	GAT Asp	TCG Ser	TGG	GAT
CGT Arg	AAG Lys	TTG Leu 420	CCC	TTA Leu	GGT Gly
GCA Ala	TTC Phe	GTG Val	GAA Glu 435	TCA Ser	AAG Lys
GTG Val	GAT ASP	GCA Ala	CTT Leu	AGC Ser 450	CGT Arg
TTA Leu 385	CCA Pro	AAA Lys	CAC His	AGT Ser	ATC Ile 465
ACC Thr	ATC Ile 400	GGC Gly	TGG Trp	TCG	AGG
GCC Ala	TAC	GGA G1y 415	CCA	ACA Thr	GGG G1y

FIG. 3E

	6	<b>~</b> 1	<b>~</b> 3	~1	~1	ω
1491	1539	1592	1652	1712	1772	1783
GTC AAT Val Asn	TTC CCT Phe Pro 510	TCG TAGAACTGCT AGGATGTGAT Ser		CATCGITGIG TIGAATITIGA ATTIGAGIAT	TACAAATTTA AGTAAGATTT	
GCT TTG AGG AGT Ala Leu Arg Ser 490	. ATT GAG AAT . Ile Glu Asn	TAGAACTGCT	AGAAACTTTA	TTGAATTTGA	TACAAATTTA	
GTT GTG TGG AGG Val Val Trp Arg 485	CCT TGG ATG GAT GAA Pro Trp Met Asp Glu 505	GCA CCT ATC GCT Ala Pro Ile Ala 520	TAGTAATGAA AAATGTGTAT TATGTTAGTG ATGTAGAAAA AGAAACTTTA GTTGATGGGT	CTCATTGAGA ATAACGTGTG CATCGTTGTG	TGACGCATGA GTCATATATA	
TGT AAC Cys Asn	A GAG AAG AAT 1 Glu Lys Asn 500	CCT AAA ATC . Pro Lys Ile . 515	AAATGTGTAT	CTCATTGAGA	GTTAGAAT	£
GGT TTC AAG Gly Phe Lys 480	CCG GCT AGA Pro Ala Arg 495	GTC CAT GTG Val His Val	TAGTAATGAA	GAGAACATGT	TGGTGAAATT CI	TACGCTTTCT

9900909099	TACCTCTAGA	TACCTCTAGA CCTGGCGATT CAACGTGGTC GGATCATGAC GCTTCCAGAA	CAACGTGGTC	GGATCATGAC	GCTTCCAGAA	09
AACATCGAGC	AAGCTCTCAA	AAGCTCTCAA AGCTGACCTC TTTCGGATCG TACTGAACCC GAACAATCTC	TTTCGGATCG	TACTGAACCC	GAACAATCTC	120
GTTATGTCCC	GTCGTCTCCG	GICGICICCG AACAGACAIC CICGIAGCIC GGAITAICGA CGAAICCAIG	CTCGTAGCTC	GGATTATCGA	CGAATCCATG	180
GCTATACCCA	ACCTCCGTCT	ACCTCCGTCT TCGTCACGCC TGGAACCCTC TGGTACGCCA ATTCCGCTCC	TGGAACCCTC	TGGTACGCCA	ATTCCGCTCC	240
CCAGAAGCAA	CCGGCGCCGA	CCGGCGCCGA ATTGCGCGAA TTGCTGACCT GGAGACGGAA CATCGTCGTC	TTGCTGACCT	GGAGACGGAA	CATCGTCGTC	300
GGGTCCTTGC	GCGATTGCGG	GCGATTGCGG CGGAAGCCGG GTCGGGTTGG GGACGAGACC CGAATCCGAG	GTCGGGTTGG	GGACGAGACC	CGAATCCGAG	360
CCTGGTGAAG	AGGTTGTTCA	AGGITGITCA TCGGAGAITT ATAGACGGAG ATGGATCGAG CGGITTTGGG	ATAGACGGAG	ATGGATCGAG	CGGTTTTGGG	420
GAAAGGGGAA	GTGGGTTTGG	GTGGGTTTGG CTCTTTTGGA TAGAGAGAGT GCAGCTTTGG AGAGAGACTG	TAGAGAGAGT	GCAGCTTTGG	AGAGAGACTG	480
GAGAGGTTTA	GAGAGAGACG	GAGAGACG CGCCGGATAT TACCGGAGGA GAGGCGACGA GAGATAGCAT	TACCGGAGGA	GAGGCGACGA	GAGATAGCAT	540
TATCGAAGGG		GAGGGAGAAA GAGTGACGTG GAGAAATAAG AAACCGTTAA GAGTCGGATA	GAGAAATAAG	AAACCGTTAA	GAGTCGGATA	009

## **FIG. 4A**

TTATCATAT	TAAAAGCCCA	ATGGGCCTGA	TAAAAGCCCA ATGGGCCTGA ACCCATTTAA ACAAGACAGA TAAATGGGCC	ACAAGACAGA	TAAATGGGCC	099
STGTGTTAAG	TTAACAGAGT	GTTAACGTTC	GITAACGITC GGITTCAAAT GCCAACGCCA TAGGAACAAA	GCCAACGCCA	TAGGAACAAA	720
ACAAACGTGT	CCTCAAGTAA	ACCCCTGCCG	CCTCAAGTAA ACCCCTGCCG TTTACACCTC AATGGCTGCA TGGTGAAGCC	AATGGCTGCA	TGGTGAAGCC	780
ATTAACACGT	GGCGTAGGAT	GCATGACGAC	GGCGTAGGAT GCATGACGAC GCCATTGACA CCTGACTCTC	CCTGACTCTC	TTCCCTTCTC	840
FTCATATATC	TCTAATCAAT	TCAACTACTC	TCTAATCAAT TCAACTACTC ATTGTCATAG CTATTCGGAA AATACATACA	CTATTCGGAA	AATACATACA	006
CATCCTTTTC	TCTTCGATCT	CTCTCAATTC	ACAAGAAGCA AAGTCGACGG	AAGTCGACGG	ATCCCTGCAG	096
PAATTACGC	CATGACTATT		TTCATAGTCC AATAAGGCTG ATGTCGGGAG TCCAGTTTAT	ATGTCGGGAG	TCCAGTTTAT	1020
SAGCAATAAG	GTGTTTAGAA		TTTGATCAAT GTTTATAATA AAAGGGGGAA GATGATATCA	AAAGGGGAA	GATGATATCA	1080
CAGTCTTTTG		CTTTTGTTAA	TTCTTTTTGG CTTTTGTTAA ATTTGTGTGT TTCTATTTGT AAACCTCCTG	TTCTATTTGT	AAACCTCCTG	1140
FATATGTTGT		CTTTTTAAGT	ACTICTITICC CTITITIAAGI GGIAICGICI ATAIGGIAAA ACGITAIGIT	ATATGGTAAA	ACGTTATGTT	1200

FIG. 4B

r 1260	1320	r 1380	3 1440	1500	1560	3 1620	1647
тасттататт	AGCCGAGCTC	GAAGATCTC	AGCTCTTAAC	TTACAATGG	AGTTTGTTT	TTGAGACATG	
GTTTTATCTT	GTAGACTAGC	GATCAGATGT	GTTGGCATTA	TAGTAAGGAA	ATCGAATAAG	TGAATGAACG	
AAGACTGCAT	GTTCCGTAGA	AACAGCTGGC AATGTGAACA CTGGATGCAA GATCAGATGT GAAGATCTCT	CTATATTTT	CTGATGCAGT CATTGGTTCA TACACATATA TAGTAAGGAA TTACAATGGC	GAATTGCCTT	ATGGGATGTA ATACATGGGA TTTGGGAGTT TGAATGAACG	
TTAGGATAAA	CATAGATCTG	AATGTGAACA	CATATCGTGT	CATTGGTTCA	TAGGCCACCT	ATACATGGGA	ටපටපටපප
TGGTCTTTCC TTTTCTCTGT TTAGGATAAA AAGACTGCAT GTTTTTATCTT TAGTTATATT	AATGAACTTT CATAGATCTG GTTCCGTAGA GTAGACTAGC AGCCGAGCTG	AACAGCTGGC	TGGGATTGAA CATATCGTGT CTATATTTTT GTTGGCATTA AGCTCTTAAC	CTGATGCAGT	TCAAAAACAG TAGGCCACCT GAATTGCCTT ATCGAATAAG AGTTTGTTTC	ATGGGATGTA	TAGAGGTACC
TGGTCTTTCC	ATGTTGAGTA	AGCTGAACTG	AATATGGTGG	АТАСАТАТАА	AACCCAAACT	CCCCCACTTC	GCAGAACCTC

48	96	144	192	240	288	336
GTT	TTC	AAC	GTT	GTT	GAT	TGC
Val	Phe	Asn	Val	Val	Asp	Cys
ATT	ACG	GTA	GCG	GAA	TAT	GTT
Ile	Thr	Val	Ala	Glu	Tyr	Val
GAG	CCA	TCC	CAT	GCC	GAC	ACC
Glu	Pro		His	Ala	Asp	Thr
ACC	TCA	CAA	AAC	AGT	TGG	TTG
Thr	Ser	Gln	Asn	Ser	Trp	Leu
TCT	GGT	CTT	ATA	TTT	CTT	GTC
Ser	Gly		Ile	Phe	Leu	Val
CIC	GCC Ala	TTT Phe	CTC	GTG Val	AAG Lys	TTT Phe
CTA	AAC	GAT	TAC	CTT	AAG	GTC
Leu	Asn	Asp	Tyr	Leu	Lys	Val
GAT	CCA	CCG	CAC	GTG	TGG	GGT
ASP	Pro	Pro	His	Val	Trp	Gly
CAA G1n	GGT Gly	TTA Leu	$\mathtt{TAT}$	CTT Leu	ATT Ile	TTC
GAA	JCC	CGT	GGT	GTT	GAG	TTC
Glu		Arg	Gly	Val	Glu	Phe
AGC	CCT	AGA	CTT	CCG	GAA	GGA
Ser		Arg	Leu	Pro	Glu	G1y
TCT	GAA	CGG	AAA	ATA	GGA	ATC
Ser	Glu	Arg	Lys	Ile	Gly	Ile
AGG	ATC	GTC	GTG	ACG	AGC	GTC
Arg	Ile	Val	Val	Thr	Ser	Val
AGT	GGG	AGA	TAC	GCG	TTA	ACC
Ser	G1y	Arg		Ala	Leu	Thr
ATG	CGT	GTC	AAG	TTG	AGT	GCA
Met	Arg	Val	Lys		Ser	Ala
GAA	AAC Asn	TCG Ser	TTG	TAC	GGG	ATC Ile

FIG. 5A

384	432	480	528	576	624	672	720	
GCT Ala	ATA Ile	TTC Phe	GTC Val	GGT Gly	TTC Phe	AAC Asn	AAC Asn	
TTC G Phe A	TTC A Phe I	GGA T	TAC G Tyr V	GAA G Glu G	CTC T Leu P	GTT A Val A	ATT A Ile A	
GAC TARSP P	GAG T Glu P	CTC G Leu G	ACG T Thr T	AAA G Lys G	GAA C Glu L	GTG G Val V	GTG A Val I	
ATT G Ile A	GAA G Glu G	ATC C Ile L	GAA A Glu T	ATG A Met L	GAC G Asp G	CTC G Leu V	ATG G Met V	
CTC A Leu I	AGA G Arg G	GAG A Glu I	GAT G Asp G	ACG A Thr M	CTC G Leu A	GTC C Val L	GCG A Ala M	
TAT C Tyr L	ACA A Thr A	GAA G Glu G	GGC G	ACA A Thr I	GCA C Ala I	GGT G	TCC G	<b>5B</b>
GTT 1 Val 1	GTG 7 Val 1	GAC (Asp (	ATA C Ile C	ACA 7 Thr 7	GGC (	GTA ( Val (	CTC :	FIG.
TCT (	AAG ( Lys '	TTC (Phe 1	GGA 2	AAC Asn	TTC (	GAC (ASp	TCA	
CGA '	CTT	AAG	TCA	GAA Glu	ATA Ile	AAA Lys	CCG	
CCA	GAA Glu	GGC G1y	GCC Ala	TCG Ser	ATG Met	CCG Pro	ACT Thr	
CGT Arg	GAT Asp	TCA Ser	CAA G1n	TCG Ser	ATG Met	AAA Lys	CCG	
TCT Ser	TCC Ser	AAA Lys	CTT	TCT Ser	TCG	GTC Val	AAC Asn	
ATG Met	CCT	AGA Arg	ATC Ile	ATC Ile	GCC Ala	CGT Arg	TTT Phe	
TTC	AAG Lys	GCT Ala	AGG Arg	TCA Ser	GAA Glu	ACA Thr	ATC Ile	
TAC	TTC	CTA	AAG Lys	AGA Arg	GAA Glu	AAG Lys	AGT	
GTC Val	TGT Cys	GAT Asp	AAG Lys	CCA	CGT	GAG Glu	TGC	

768	816	864	912	096	1008	1056	1104	
ATG Met	CTT	GTT Val	AAC Asn	CGC Arg	ACT Thr	GAA Glu	GAA Glu	
666	ATG Met	ATG Met	CCT	CGC Arg	CGG Arg	GAA Glu	ATG Met	
GGA Gly	GAC Asp	GAG Glu	ATA Ile	AAC Asn	GTC Val	CAG Gln	CTA	
CTA Leu	CGT	ACC Thr	GTT Val	TCT Ser	ATT Ile	$ extsf{TAC}  extsf{TY}  extsf{T}$	GAC Asp	
AAC Asn	GCT Ala	AGT Ser	ATG Met	CTG	CAC His	GTG Val	AGA Arg	
${\tt TAC} \\ {\tt TYY}$	CTT Leu	GTG Val	TCA Ser	ATG Met	GAG Glu	AGT Ser	AGC Ser	. 5C
AGC Ser	GAT ASp	GTT Val	AAG Lys	GTT Val	CTT Leu	AGG Arg	ATA Ile	FIG.
CTT Leu	GTT Val	GTG Val	GAC Asp	GCC Ala	CGC Arg	TTC Phe	AAA Lys	
ATA Ile	GCC Ala	GCG Ala	CGT Arg	TCC Ser	TAC	AGC Ser	TTA Leu	
AAC Asn	ATA Ile	$\mathtt{TAC}$	GGA Gly	TGC	AAG Lys	CGT Arg	GGA Gly	
$ ext{GGG}$	ATC Ile	AGT Ser	GTG Val	GGT	GCT Ala	GAC Asp	AAG Lys	
AGA Arg	GGA Gly	AAT Asn	$\mathtt{TAC}$	ATG Met	CAT His	GAC Asp	TTC Phe	
ATG Met	GCA Ala	CCG Pro	TGG Trp	AGG Arg	CGC Arg	GCC Ala	GGA Gly	
AAG Lys	TCA Ser	AAC Asn	AAT Asn	TTT Phe	TTC Phe	GCT Ala	CAA Gln	
$ ext{TAC}$	TGC	TCT	TAT Tyr	TTC Phe	GAC Asp	AAG Lys	GAA Glu	
CAC His	GGT Gly	CAG Gln	GGG	TGC	CGT	CAC His	GAT Asp	

1152	1200	1248	1296	1344	1392	1440	1488	
GGT GAA GCT CTC AAG ACC AAC ATC ACC ACC TTA GGC CCT CTC 11 Gly Glu Ala Leu Lys Thr Asn Ile Thr Thr Leu Gly Pro Leu	CCT TTC TCC GAG CAG CTT CTC TTC TTT GCC GCT TTG ATC CGT Pro Phe Ser Glu Gln Leu Leu Phe Phe Ala Ala Leu Ile Arg	TTC TCA CCC GCC GCC AAA ACT ACC ACC ACC TCC TCC TCA GCC Phe Ser Pro Ala Ala Lys Thr Thr Thr Thr Ser Ser Ala	AAA ATC AAC GGA GCC AAG TCG TCA TCC TCT GAT CTA TCC Lys Ile Asn Gly Ala Lys Ser Ser Ser Ser Ser Asp Leu Ser	TAC ATC CCG GAC TAC AAG CTT GCC TTC GAG CAT TTC TGC TTC Tyr Ile Pro Asp Tyr Lys Leu Ala Phe Glu His Phe Cys Phe	GCA AGC AAA GCG GTG CTT GAG GAG CTT CAG AAG AAT CTA GGC Ala Ser Lys Ala Val Leu Glu Glu Leu Gln Lys Asn Leu Gly	GAT GAG AAC ATG GAG GCT TCT AAG ATG ACT TTA CAC AGG TTT Asp Glu Asn Met Glu Ala Ser Lys Met Thr Leu His Arg Phe	ACT TCC AGC AGT GGA ATC TGG TAC GAG CTT GCT TAC ATG GAG Thr Ser Ser Gly Ile Trp Tyr Glu Leu Ala Tyr Met Glu	FIG. 5D
GTT GGA Val Gly	GTC CTT Val Leu	AGA ACT Arg Thr	ACT GCG Thr Ala	AAG CCG Lys Pro	CAC GCG His Ala	TTG AGT Leu Ser	GGA AAC Gly Asn	

1536	1584	1632	1687	1747	1807	1810
				წ	A.A.	
TTT Phe	AAG Lys	CGT Arg	TAA	ATT(	AAA	
GCT Ala	AGG Arg	AAC Asn	'AAT	GTC	AAA	
ATT G Ile A	ATG A Met A	ATT A Ile A	ICT	C F	A A	
n H.A.	A A M	Ο is Η Έ	Ę	ŢŢĞ	AAA	
CAG Gln	GCA Ala	TGC Cys	\TYT\	TGT	AAA	
TGG Trp	AAG Lys	GAT Asp	ATTA	GTI	AAA	
GTT Val	TGG	GTT Val	T.	GAC	CAA	
AGG GTT Arg Val	GTT Val	TGG	AAAA	GATA	AGTC	
GAT	GTG Val	CCT	TTT	GAT	TCA	
GGC Gly	AGT	AAT Asn	TA T	GTTG	TGGT	
AGA GGC Arg Gly	AAC	AAC	CAIT	TGTT	TGGA	
CGT	TGT	AGG	TGATCATTTA TTTTAAAAT TATTATTTCT TCTTAATTAA	C CI	G AA	
GTT Val	AAG Lys	GCA Ala	CTC	TCTT	ATA	
AGT Ser	TTT Phe	CCG Pro	GCT Ala	ATCTCTCTTC CTTGTTG GATGATAGAC GTTTGTTTGC TGGTCATTCG 1747	CTTCTATAAG AATGGATGGT TCAAGTCCAA AAAAAAAAA AAAAAAAA 1807	
GAG Glu	GGT Gly	AAG Lys	GTC Val			
AAG Lys	TCA Ser	AAG Lys	CCT	ATCATCTATG	TATCTTAAGA	
GCC Ala	$ ext{GGG}$	GTG Val	TAC Tyr	ATC?	TATC	AAA

FIG. SE

51	66	147	195	243	291	339	
GTCGACAAA ATG ACG TCC ATT AAC GTA AAG CTC CTT TAC CAT TAC GTC ATA 5 Met Thr Ser Ile Asn Val Lys Leu Leu Tyr His Tyr Val Ile	AAC CTT TTC AAC CTT TGT TTC TTT CCA TTA ACG GCG ATC GTC GCC Asn Leu Phe Asn Leu Cys Phe Phe Pro Leu Thr Ala Ile Val Ala	AAA GCC TAT CGG CTT ACC ATA GAC GAT CTT CAC CAC TTA TAC TAT Lys Ala Tyr Arg Leu Thr Ile Asp Asp Leu His His Leu Tyr Tyr	TAT CTC CAA CAC AAC CTC ATA ACC ATT GCT CCA CTC TTT GCC TTC Tyr Leu Gln His Asn Leu Ile Thr Ile Ala Pro Leu Phe Ala Phe	GTT TTC GGT TCG GTT CTC TAC ATC GCA ACC CGG CCC AAA CCG GTT Val Phe Gly Ser Val Leu Tyr Ile Ala Thr Arg Pro Lys Pro Val	CTC GTT GAG TAC TCA TGC TAC CTT CCA CCA ACG CAT TGT AGA TCA Leu Val Glu Tyr Ser Cys Tyr Leu Pro Pro Thr His Cys Arg Ser	ATC TCC AAG GTC ATG GAT ATC TTT TAC CAA GTA AGA AAA GCT GAT Ile Ser Lys Val Met Asp Ile Phe Tyr Gln Val Arg Lys Ala Asp	
F	ACC	GGA Gly	TCC	ACC Thr	TAC	AGT Ser	

FIG. 6A

387	435	483	531	579	627	675	723	
TTG Leu	CCC Pro	CGT Arg	AAG Lys	TCA Ser	ACT Thr	GGT Gly	CAT His	
TTC Phe	GGG Gly	GCG Ala	TTC Phe	AAC Asn	AAC Asn	ATG Met	TTG Leu	
GAC ASP	CAC His	GCG	CTA Leu	GTG Val	GTT Val	GGC	TTG Leu	
CTT Leu	ACC Thr	GCG Ala	AAT Asn	GTG Val	GTC Val	GGT Gly	GAC Asp	
TGG Trp	GAA Glu	TTT Phe	GAA Glu	CTT Leu	ATG Met	CTT Leu	AAG Lys	
TCC Ser	GAT Asp	ACT Thr	CTA	ATA Ile	GCG Ala	AAC Asn	GCA Ala	
TCG Ser	GGC G1Y	AAG Lys	GCG Ala	$_{\rm GLY}^{\rm GGT}$	TCC Ser	TTT Phe	CTA	<b>6B</b>
GAC Asp	CTA	CGG Arg	GGT Gly	ATA Ile	CTC	AGC Ser	GAT Asp	FIG.
GAT Asp	GGT Gly	CCC	ATT Ile	GAT Asp	TCG	AGA Arg	ATT Ile	
TGC Cys	TCA Ser	CCT	ATC Ile	AAA Lys	CCT	GTA Val	GCC Ala	
ACG Thr	CGT Arg	GTC Val	GTT Val	CCT Pro	ACT Thr	AAC Asn	ATA Ile	
GGC Gly	GAA Glu	CAG Gln	CAA Gln	AAC Asn	CCA	AGC Ser	GTT Val	
AAC Asn	CAA Gln	CTT Leu	GAG	GTT Val	AAT Asn	CGA Arg	GGC Gly	
CGG Arg	ATT Ile	CTG	ACG Thr	AAT Asn	TTT Phe	CTC Leu	GCC Ala	
TCT Ser	AAG Lys	GGG G1y	GAG Glu	ACC Thr	ATG Met	AAG Lys	AGT Ser	
CCT	AGG Arg	GAG Glu	GAA Glu	AAC Asn	AGC Ser	TTC	TGT	

	FIG. 6C
1107	CTT CCG TTA AGC GAG AAA CTT CTT TTT TTC GTT ACC TTC ATG GGC AAG 1 Leu Pro Leu Ser Glu Lys Leu Leu Phe Phe Val Thr Phe Met Gly Lys
1059	GCT GGT CGA ACG GTT AAG AAA AAC ATA GCA ACG CTG GGT CCG TTG ATT 1 Ala Gly Arg Thr Val Lys Lys Asn Ile Ala Thr Leu Gly Pro Leu Ile
1011	GAG AAC GGC AAA ACC GGA GTG AGT TTG TCC AAG GAC ATA ACC GAT GTT 1 Glu Asn Gly Lys Thr Gly Val Ser Leu Ser Lys Asp Ile Thr Asp Val
963	ACC GGA GCT GAC GAC AAG TCT TTT CGT TGC GTG CAA CAA GGA GAC GTT Thr Gly Ala Asp Asp Lys Ser Phe Arg Cys Val Gln Gln Gly Asp Val
915	GAT CGT AGA CGG TCC AAG TAC GAG CTA GTT CAC ACG GTT CGA ACG CAT Asp Arg Arg Ser Lys Tyr Glu Leu Val His Thr Val Arg Thr His
867	TTG TTC CGT GTT GGT GGG GCC GCT ATT TTG CTC TCC AAC AAG CCT AGA Leu Phe Arg Val Gly Gly Ala Ala Ile Leu Leu Ser Asn Lys Pro Arg
819	TAT AAC ATT TAC GCT GGT GAT AAT AGG TCC ATG ATG GTT TCA AAT TGC Tyr Asn Ile Tyr Ala Gly Asp Asn Arg Ser Met Wal Ser Asn Cys
771	GTC CAT AAA AAT ACG TAT GCT CTT GTG GTG AGC ACA GAG AAC ATC ACT Val His Lys Asn Thr Tyr Ala Leu Val Val Ser Thr Glu Asn Ile Thr

1155	1203	1251	1299	1347	1395	1442
G GAC TTC AAG	A GCC GTG ATT	T GTA GAG GCA	T AGC TCA ATA	G AAG AAA GGT	G TGT AAC AGT	A TAGGATCC
o Asp Phe Lys	s Ala Val Ile	p Val Glu Ala	r Ser Ser Ile	t Lys Lys Gly	s Cys Asn Ser	s
GTC CCG	GGC AAA	ATC GAT	TCA TCT	AGG ATG	TTT AAG	TCC AAA
Val Pro	Gly Lys	Ile Asp	Ser Ser	Arg Met	Phe Lys	. Ser Lys
TAT TAC	GCC GGA	GCA CCG	AAC ACT	AAA GGA	TCA GGC	AAA GCT
Tyr Tyr	Ala Gly	Ala Pro	Asn Thr	Lys Gly	Ser Gly	Lys Ala
CAT	CAT	CTA	GGA	GCA	666	GTC
His	His		Gly	Ala	G1y	Val
ATC AAA	TGT ATA	CTA GGC	AGA TTT	ATA GAA	GCT TTA	AAC AAT
Ile Lys	Cys Ile	Leu Gly	Arg Phe	Ile Glu	Ala Leu	Asn Asn
GAC AAA	CAT TTT	AAG AAC	TTA CAT	GCA TAC	CAG ATT	GCT CTA
ASD LYS	His Phe	Lys Asn	Leu His	Ala Tyr	Gln Ile	Ala Leu
AAA	GAC	GAG	ACG	TTG	TGG	GTG
Lys	Asp	Glu	Thr		Trp	Val
CTT TTC	GCT ATC	GTG CTA	AGA TCA	TAT GAG	AAA GTT	GTT TGG
Leu Phe	Ala Ile	Val Leu	Arg Ser	Tyr Glu	Lys Val	Val Trp
AAA Lys	CTT	GAT Asp	TCA	TGG	AAT Asn	GCA Ala

FIG. 6D

75	66	147	195	243	291	339
GTCGACAAA ATG ACG TCC ATT AAC GTA AAG CTC CTT TAC CAT TAC GTC ATA 51	AAC CTT TTC AAC CTT TGC TTC TTT CCG TTA ACG GCG ATC GTC GCC 99	AAA GCC TAT CGG CTT ACC ATA GAC GAT CTT CAC CAC TTA TAC TAT 147	TAT CTC CAA CAC AAC CTC ATA ACC ATC GCT CCA CTC TTT GCC TTC 195	GTT TTC GGT TCG GTT CTC TAC ATC GCA ACC CGG CCC AAA CCG GTT 243	CTC GTT GAG TAC TCA TGC TAC CTT CCA CCA ACG CAT TGT AGA TCA 291	ATC TCC AAG GTC ATG GAT ATC TTT TAT CAA GTA AGA AAA GCT GAT 339
Met Thr Ser Ile Asn Val Lys Leu Leu Tyr His Tyr Val Ile	Asn Leu Phe Asn Leu Cys Phe Phe Pro Leu Thr Ala Ile Val Ala	Lys Ala Tyr Arg Leu Thr Ile Asp Asp Leu His His Leu Tyr Tyr	Tyr Leu Gln His Asn Leu Ile Thr Ile Ala Pro Leu Phe Ala Phe	Val Phe Gly Ser Val Leu Tyr Ile Ala Thr Arg Pro Lys Pro Val	Leu Val Glu Tyr Ser Cys Tyr Leu Pro Pro Thr His Cys Arg Ser	Ile Ser Lys Val Met Asp Ile Phe Tyr Gln Val Arg Lys Ala Asp
GTC	ACC	GGA	TCC	ACC	TAC	AGT
	Thr	Gly	Ser	Thr	Tyr	Ser

FIG. 7A

387	435	483	531	579	627	675	723	
CCT TCT CGG AAC GGC ACG TGC GAT GAC TCG TCG TGG CTT GAC TTC TTG 3 Pro Ser Arg Asn Gly Thr Cys Asp Asp Ser Ser Trp Leu Asp Phe Leu	AGG AAG ATT CAA GAA CGT TCA GGT CTA GGC GAT GAA ACT CAC GGG CCC 4 Arg Lys Ile Gln Glu Arg Ser Gly Leu Gly Asp Glu Thr His Gly Pro	GAG GGG CTG CTT CAG GTC CCT CCC CGG AAG ACT TTT GCG GCG GCG CGT 4 Glu Gly Leu Leu Gln Val Pro Pro Arg Lys Thr Phe Ala Ala Arg	GAA GAG ACG GAG CAA GTT ATC ATT GGT GCG CTA GAA AAT CTA TTC AAG 5 Glu Glu Thr Glu Gln Val Ile Ile Gly Ala Leu Glu Asn Leu Phe Lys	AAC ACC AAC GTT AAC CCT AAA GAT ATA GGT ATA CTT GTG GTG AAC TCA 5 Asn Thr Asn Val Asn Pro Lys Asp Ile Gly Ile Leu Val Val Asn Ser	AGC ATG TTT AAT CCA ACT CCA TCG CTC TCC GCG ATG GTC GTT AAC ACT 6 Ser Met Phe Asn Pro Thr Pro Ser Leu Ser Ala Met Val Val Asn Thr	TTC AAG CTC CGA AGC AAC GTA AGA AGC TTT AAC CTT GGT GGC ATG GGT 6	TGT AGT GCC GGC GTT ATA GCC ATT GAT CTA GCA AAG GAC TTG TTG CAT 7 Cys Ser Ala Gly Val Ile Ala Ile Asp Leu Ala Lys Asp Leu Leu His	FIG. 7B

AAC ATT TAC GCT GGT GAT AAT AGG TCC ATG ATG GTT TCA AAT ASN 11e Tyr Ala Gly Asp Asn Arg Ser Met Met Val Ser Asn TTC CGT GTT GGG GCC GCT ATT TTG CTC TCC AAC AAG CCT Phe Arg Val Gly Gly Ala Ala Ile Leu Leu Ser Asn Lys Pro CGT AGA CGG TCC AAG TAC GAG CTA GTT CAC ACG GTT CGA ACG ACG ACG ACG TCC AAG TAC GAG CTA TTT CGT TGC GTG CAA CAA GGA GAC GIY Ala Asp Asp Lys Ser Phe Arg Cys Val Gln Gln Gly Asp AAC GGC CAA AGG GTG AAG GTG AGG GTG TCC AAG GAC TTG TCC AAG GAC TTG ASP GAG GTG AAA AAC ATA GCA ACG TTG GGT CCG TTG GGT CGA ACG GTT AAG AAA AAC ATA GCA ACG TTG GGT CCG TTG GLY ARG Thr Val Lys Lys Asn Ile Ala Thr Leu Gly Pro Leu CCG TTA AGC GAA ACG TTG TTT TTT TTC GTT ACC TTC ATG GGC CCG TTG ACG TTG CCG TTG ACG TTG TAC CTT TTT TTC GTT ACC TTC ATG GGC Pro Leu Ser Glu Lys Leu Leu Phe Phe Val Thr Phe Met Gly Pro Leu Ser Glu Lys Leu Leu Phe Phe Val Thr Phe Met Gly	ı	c 819 s	A 867 Y	T 915	T 963	T 1011	T 1059 e	G 1107 s	
His Lys Asn Thr Tyr Ala Leu Val Val Ser Thr Glu Asn Asn Ile Tyr Ala Gly Asp Asn Arg Ser Met Met Val Ser TTC CGT GTT GGT GGT GGT GTT TTG CTC TCC AAC AAG Phe Arg Val Gly Gly Ala Ala Ile Leu Leu Ser Asn Lys CGT AGG TCC AAG TAC GAG CTA GTT CAC ACG GTT CGA Arg Arg Arg Ser Lys Tyr Glu Leu Val His Thr Val Arg Gly Ala Asp Asp Lys Ser Phe Arg Cys Val Gln Gln Gly Ala Asp Asp Lys Ser Phe Arg Cys Val Gln Gln Gly Asn Gly Lys Ile Gly Val Ser Leu Ser Lys Asp Ile Thr GGT CGA ARG TCT TTT CGT TGC GTG CAA ARG TCT TTT CGT TGC GTG CAA ARG GGA GIY Ash ATC GGA ATA ACC ASG AGG ATA ASP ASP Lys Ser Phe Arg Cys Val Gln Gln Gly Ash Gly Lys Ile Gly Val Ser Leu Ser Lys Asp Ile Thr GGT CCG GIY Arg Thr Val Lys Lys Ash Ile Ala Thr Leu Gly Pro CCG TTA AGC AAA CTT TTT TTC GTT ACC TTC ATG Pro Leu Ser Glu Lys Leu Leu Phe Phe Val Thr Phe Met	e Thr								
AAC ATT TAC GCT GGT GAT AAT AGG TCC ATG ATG GTT ASN Ile Tyr Ala Gly Asp Asn Arg Ser Met Met Val TTC CGT GTT GGT GGG GCC GCT ATT TTG CTC TCC AAC Phe Arg Val Gly Gly Ala Ala Ile Leu Leu Ser Asn CGT AGG ACG GTT ATG GTC GAC GAC TAC GAG TTC GAG GTT ATG ATG ATG TTC CAC AGG GTT ATG ATG ATG ATG TTC CAC AGG GTT ATG ATG ATG ATG ATG ATG TCT TTT CGT TGC GTG CAA CAA GLY Ala Asp Asp Lys Ser Phe Arg Cys Val Gln Gln Asn Gly Lys Ile Gly Val Ser Leu Ser Lys Asp Ile GGT CGA ACG GTT AAG AAA AAC GAG AAA AAC GGG AAA AAC GTG ATG ACG TTG GGT GGT CGG ATG ATG ATG TLY Ile Gly Val Ser Leu Ser Lys Asp Ile GTY AAG AAA AAC TTT TTC GTT ACC TTC CCG TTA AGC GAG AAA CTT CTT TTT TTC GTT ACC TTC Pro Leu Ser Glu Lys Leu Leu Phe Phe Val Thr Phe Dro Leu Ser Glu Lys Leu Leu Phe Phe Val Thr Phe									
His Lys Asn Thr Tyr Ala Leu Val Val Ser Thrand Ile Tyr Ala Gly Asp Asn Arg Ser Met Met Trc CGT GTT GGT GGT GCT ATT TTG CTC TCC Phe Arg Val Gly Gly Ala Ala Ile Leu Leu Ser CGT AGG TCC AGG TCT TTT CGT TGC GTG CAA GLY Ala Asp Asp Lys Ser Phe Arg Cys Val Gln Asn Gly Lys Ile Gly Val Ser Leu Ser Lys Asp GGT CGA AAG AAC AAA AAC AAA AAC GAA AAC AAA AAC GAA AAC TTG TCC AAG GAC ASN Gly Lys Ile Gly Val Ser Leu Ser Lys Asp GGT CGG TTA AGG AAA AAC AAA AAC AAA AAC AAA AAC TTG TCC AAG GAC ASN Gly Lys Ile Gly Val Ser Leu Ser Lys Asp Thr Leu CCG TTA AGC GAG AAA CTT CTT TTT TTC GTT ACC PRO Leu Ser Glu Lys Leu Leu Phe Phe Val Thr Leu CCG TTA AGC GAG AAA CTT CTT TTT TTC GTT ACC PRO Leu Ser Glu Lys Leu Leu Phe Phe Val Thr									
His Lys Asn Thr Tyr Ala Leu Val Val Ser Asn Asn Ile Tyr Ala Gly Asp Asn Arg Ser Met TrC CGT GTT GGT GGG GCC GCT ATT TrG CTC Phe Arg Val Gly Gly Ala Ala Ile Leu Leu Leu CGT AGG TCC AGG TCC AGG TAC GAG CTA GTT CAC ARG ARG TAC GAG CTA GTT CAC ARG ARG TCT TTT CGT TGC GTG GIY Ala Asp Asp Lys Ser Phe Arg Cys Val Asn Gly Lys Ile Gly Val Ser Leu Ser Lys GTT TCC AAG ASN GIY Lys Ile Gly Val Ser Leu Ser Lys CGT	Glu								
His Lys Asn Thr Tyr Ala Leu Val Val AAC ATT TAC GCT GGT GAT AAT AGG TCC Asn Ile Tyr Ala Gly Asp Asn Arg Ser TTC CGT GTT GGT GGG GCC GCT ATT TTG Phe Arg Val Gly Gly Ala Ala Ile Leu Arg Arg Arg Ser Lys Tyr Glu Leu Val GGA GCT GAC AAG TCT TTT CGT TGC GIY Ala Asp Asp Lys Ser Phe Arg Cys AAC GGC AAA ATC GGA GTG AGT TTG TCC Asn Gly Lys Ile Gly Val Ser Leu Ser GGT CGA ACG GTT AAG AAA AAC ATA GCA GIY Arg Thr Val Lys Lys Asn Ile Ala CCG TTA AGC GAG AAA CTT TTT TTC Pro Leu Ser Glu Lys Leu Leu Phe Phe Pro Leu Ser Glu Lys Leu Leu Phe Phe	$\operatorname{Thr}$	ATG Met	TCC Ser	ACG Thr					
His Lys Asn Thr Tyr Ala Leu Val AAC ATT TAC GCT GGT GAT AAT AGG Asn Ile Tyr Ala Gly Asp Asn Arg Phe Arg Val Gly Gly Ala Ala Ile CGT AGA CGG TCC AAG TAC GAG CTA Arg Arg Arg Ser Lys Tyr Glu Leu GGA GCT GAC GAC AAG TCT TTT CGT Gly Ala Asp Asp Lys Ser Phe Arg AAC GGC AAA ATC GGA GTG AGT TTG Asn Gly Lys Ile Gly Val Ser Leu GGT CGA ACG GTT AAG AAA AAC ATA Gly Arg Thr Val Lys Lys Asn Ile CCG TTA AGC GAG AAA CTT CTT TTT Pro Leu Ser Glu Lys Leu Leu Phe	Ser	ATG Met		CAC His					
His Lys Asn Thr Tyr Ala Leu Asn Ile Tyr Ala Gly Asp Asn TTC CGT GTT GGT GGG GCC GCT Phe Arg Val Gly Gly Ala Ala Arg Arg Arg Ser Lys Tyr Glu Arg Arg Asp Asp Lys Ser Phe Ash Gly Lys Ile Gly Val Ser Ash GTY Ash Arg Ash Atc GGC AAA ATC GGA GTG AGT Ash Gly Lys Ile Gly Val Ser GT Arg Thr Val Lys Lys Ash CCG TTA AGC GAG AAA AAC GLY Arg Thr Val Lys Lys Ash CCG TTA AGC GAG AAA CTT CTT Pro Leu Ser Glu Lys Leu Leu	Val	TCC Ser	TTG Leu	GTT Val					<b>7</b> C
His Lys Asn Thr Tyr Ala Asn Trc GGT GAT Asn Trc GGT GGT GGC GCC Phe Arg Val Gly Gly Ala Arg Arg Ser Lys Tyr Gly Ala Asn Gly Lys Ser GGT GGC AAG TCT GGC AAG TCT GGC AAG TCT GGC AAG TCT GGC AAA ATC GGA GTG ASN Gly Lys Ile Gly Val GJY Arg Thr Val Lys Lys CCG TTA AGC GAG AAA CTT Pro Leu Ser Glu Lys Leu	Val	AGG Arg							FIG.
His Lys Asn Thr Tyr AAC ATT TAC GCT GGT Asn Ile Tyr Ala Gly TTC CGT GTT GGT GGG Phe Arg Val Gly Gly GGA GCT GAC GAC AAG Gly Ala Asp Asp Lys GGT GGC AAA ATC GGA AAC GGC AAA ATC GGA ASn Gly Lys Ile Gly GGT CGA ACG GTT AAG Gly Arg Thr Val Lys CCG TTA AGC GAG AAA Pro Leu Ser Glu Lys	Leu	AAT Asn	GCT Ala	GAG Glu	TTT Phe				
His Lys Asn Thr AAC ATT TAC GCT Asn Ile Tyr Ala TTC CGT GTT GGT Phe Arg Val Gly CGT AGA CGG TCC Arg Arg Ser Gly Ala Asp Asp ASC GGC AAA ATC ASN Gly Lys Ile GGT CGA ACG GTT Gly Arg Thr Val CGG TTA AGC GAG Pro Leu Ser Glu	Ala	GAT Asp	GCC Ala	TAC Tyr		GTG Val		CTT Leu	
His Lys Asn AAC ATT TAC ASN Ile Tyr TTC CGT GTT Phe Arg Val CGT AGA CGG Arg Arg Arg GGA GCT GAC Gly Ala Asp ASC GGC AAA ASN Gly Lys GGT CGA ACG Gly Arg Thr CCG TTA AGC Pro Leu Ser	Tyr	GGT G1y	GGG G1y	AAG Lys	AAG Lys	GGA Gly	AAG Lys	AAA Lys	
His Lys AAC ATT ASN 11e TTC CGT Phe Arg Arg Arg GGA GCT Gly Ala ASN Gly GGT CGA GIY Arg CCG TTA	Thr	GCT Ala	GGT Gly	TCC Ser	GAC	ATC Ile	GTT Val	GAG Glu	
AAC AAC ASD CGT Arg GGA GGY GGIY CCGT ARC ASD CCGT ACC ASD CCG	Asn	$\mathtt{TAC}$	GTT Val	CGG Arg	GAC Asp	AAA Lys	ACG Thr	AGC Ser	
AAC AAC ASD CGT ACG AAC AAC ASD CGG CGG CGG CGG CGG CGG CGG CGG CGG CG	Lys	ATT Ile	CGT Arg	AGA Arg	GCT Ala	GGC Gly			
TAT TYT TYT TYT GAT ASD GAG GAG GAG GAG CTT Leu	His		TTC Phe	CGT Arg				CCG Pro	
	val Val	$\mathtt{T}\mathtt{A}\mathtt{T}$	TTG	GAT Asp	ACC Thr	GAG	GCT Ala	CTT	

1155	1203	1251	1299	1347	1395	1442
GAT TTC AAA	GCC GTG ATT	GTA GAG GCA	AGC TCA ATA	AAG AAA GGT	TGT AAC AGT	TAGGATCC
Asp Phe Lys	Ala Val Ile	Val Glu Ala	Ser Ser Ile	Lys Lys Gly	Cys Asn Ser	
GTC CCG G	GGC AGA G	ATC GAT G	TCA TCT A	AGG ATG A	TTT AAG :	TCC AAA Ser Lys
Val Pro A	Gly Arg A	Ile ASP V	Ser Ser S	Arg Met I	Phe Lys (	
$\mathtt{TAC}\\\mathtt{TY}_{\mathcal{T}}$	GGA	CCG	ACT	GGA	GGC	GCT
	Gly	Pro	Thr	G1y	G1y	Ala
CAT TAC	CAT GCC	CTA GCA	GGA AAC	GCA AAA	GGG TCA	GTC AAA
His Tyr	His Ala	Leu Ala	Gly Asn	Ala Lys	Gly Ser	Val Lys
AAA	ATA	GCC	rrr	GAA	TTA	AAT
Lys	Ile	Ala	Phe	Glu	Leu	Asn
AAA ATC	TTT TGT	AAC CTA	CAT AGA	TAC ATA	ATT GCT	CTA AAC
Lys Ile	Phe Cys	Asn Leu	His Arg	Tyr 11e	Ile Ala	Leu Asn
GAT	CAT	AAG	TTA	GCA	CAG	GCT
Asp	His	Lys	Leu	Ala	Gln	Ala
TTC AAA	ATT GAC	CTA GAG	TCA ACG	GAG TTG	GTT TGG	TGG GTG
Phe Lys	Ile Asp	Leu Glu	Ser Thr	Glu Leu	Val Trp	Trp Val
CTT	GCT	GTG	AGA	TAT	AAA	GTT
Leu	Ala	Val	Arg	Tyr	Lys	Val
AAA Lys	CTT Leu	GAT	TCA Ser	TGG	AAT Asn	GCA Ala

FIG. 7D

48	96	144	192	240	288	336
ATC Ile	TTC	TTC	GCT Ala	TGT Cys	GAC Asp	CAA Gln
TAC Tyr	TCT Ser	CAT His	ACC Thr	TCG Ser	ATG Met	TTC Phe
CTC	TCT Ser	TTC Phe	TCC Ser	TTC Phe	TTC Phe	GCT Ala
GCT Ala	CTC	CGT Arg	CTC	GAC Asp	ACA Thr	TTA Leu
AAC Asn	AAC Asn	CTC Leu	TCT Ser	CTC Leu	GAA Glu	AAC Asn
TCC Ser	GCT Ala	ACA Thr	ATC Ile	CTC Leu	CGT	GAC Asp
ATC Ile	ATC Ile	AAC Asn	TTG Leu	TTC Phe	ACT Thr	GAA Glu
CTA Leu	ACA Thr	TAC	CTC	GTC Val	TGC	ACA Thr
TAC Tyr	GCA Ala	CTC	GCA Ala	CGT Arg	ATC Ile	TTC Phe
CAT His	GCC Ala	CTC	ACC Thr	CGC Arg	CTG	ATC Ile
$\mathtt{TAT}$	CTC	TCT	GCC Ala	CCT	TCA Ser	GGC Gly
GTG Val	CTC	CTC Leu	CTC	CGT Arg	CCT	GTA Val
CTA Leu	CCT Pro	GAC Asp	ACA Thr	ACC Thr	GAC Asp	CGT Arg
AAA Lys	CTT Leu	AAC Asn	GCC Ala	ACC Thr	CCA Pro	CAA Gln
CTT Leu	CTC	ATC Ile	TCC	TTC Phe	AAA Lys	TCT Ser
AAG Lys	CTC	ACC Thr	CTC	TAC	TAC	AGA Arg

FIG. 8A

384	432	480	528	576	623
CCT	AGA Arg	GAG Glu	TGT Cys	AAG Lys	$^{\rm GG}_{\rm G1Y}$
TTC	GCG	CTT	AAT	AAT	ATG
Phe	Ala	Leu	Asn	Asn	Met
TAC	GAA	GTT	GTG	GTG	666
Tyr	Glu	Val	Val	Val	
ACT	GAA	GCG	GTG	ATT	GGC
Thr	Glu	Ala	Val	Ile	G1y
AAA Lys	ATG Met	GAC Asp	CIT	ATG Met	TTC
CAG	TGT	ATT	ATC	GCT	AAT
	Cys	Ile	Ile	Ala	Asn
${ m GGT}$	CCT	GCT Ala	$_{\rm GLY}^{\rm GGA}$	TCT Ser	TAT $TYY$
CTA	AAT	GGA	ATT	CTT	AGC
Leu	Asn	Gly	Ile	Leu	
GGT Gly	CCT	TTC	GAT ASP	TCA Ser	TTG
TCC	CCT Pro	ATG Met	AAA Lys	CCG	ÀTT Ile
AGA	GTT	GTT	CCT	ACA	AAC
Arg	Val	Val		Thr	Asn
GAA	CGT	ACA	AAA	CCA	GGC
Glu	Arg	Thr	Lys	Pro	G1y
CTC	CTT	GAA	GTG	AAT	AGA
Leu	Leu	Glu	Val	Asn	Arg
ATC Ile	CTT	GCA Ala	GGT	TTT Phe	CTT
AAG	GCT	GAG	ACC	TTG	AAG
Lys	Ala	Glu	Thr		Lys
CAA	GAA	AAA	AAG	AGC	$\mathtt{TAT}$
Gln	Glu	Lys	Lys	Ser	

FIG. 8B

48	96	144	192	240	288	336	384
CTC Leu	TTA Leu	TTC Phe	CGA Arg	TCG Ser	ATT Ile	ATT Ile	TCT Ser
AAA Lys	TTG Leu	ATC Ile	TCT	CCT	TTG	TTG	CAC His
TTT Phe	TCA Ser	TTC	ATG Met	CCG	AGT Ser	ATC Ile	ATT Ile
TTT Phe	GTC Val	GGA Gly	TTC	CTC	TCT Ser	AAG Lys	TCT Ser
CAC His	AAT Asn	ACC Thr	TTC	TAC	AAC Asn	AGG Arg	GAT Asp
ACT Thr	ATG Met	TCC Ser	GTC Val	TGC	AAC Asn	CAG Gln	CCG
ATC Ile	TTC Phe	AAT Asn	ATT Ile	TCT	ATG Met	TTC	TTA Leu <b>9A</b>
CTG Leu	TTG Leu	$ ext{TAC} \  ext{T}  ext{Y}  ext{r}$	TCC Ser	TAC	TTC	GAG Glu	TAT Tyr FIG.
TAT TYr	GTT Val	$\mathtt{TAT}$	GGA Gly	GAT ASP	AAA Lys	CTT Leu	ACT Thr ]
CAC His	GCT Ala	CTC Leu	GTC Val	CTA	CAG Gln	TCT Ser	GAG Glu
TAC	ATG Met	CAG Gln	ATT Ile	CTT Leu	$ extsf{TAC}$	ACT Thr	GAA Glu
GGC Gly	CTA Leu	CTT Leu	GCC Ala	$ extsf{TAC}$	AGC Ser	GAA Glu	GGT G1y
TTA Leu	CCT	CAT His	CTC	ATC Ile	GTT Val	AGC Ser	CTC
AAG Lys	CTC Leu	AAC Asn	ACT	TCC Ser	AAA Lys	TTC Phe	GGT G1y
CTT Leu	TTC Phe	CTA Leu	ATC Ile	AGA Arg	CAA Gln	GAT Asp	TCT Ser
AAG Lys	ATG Met	AGC	GTC Val	CCT	AGT Ser	CAA Gln	CGC Arg

432	480	528	576	607
CAG	AAT	CCC	GGA	
Gln	Asn	Pro	Gly	
GAG	ATC	AAC	AGA	
Glu	Ile	Asn	Arg	
GCG Ala	AAA Lys	TTT Phe	CIT	
GAA	ACA	TTG	AAG	
Glu	Thr	Leu	Lys	
GAA	AAT	AGT	TAT	
Glu	Asn	Ser	Tyr	
CGT	GAG	TGT	AAG	ტ
Arg	Glu	Cys	Lys	
GCG	TTC	AAT	AAC	ATG
Ala	Phe	Asn	Asn	
GCA	CTT	GTG	GTT	GGC
Ala	Leu	Val	Val	Gly
GCT	AAT	GTT	ATT	GGC
Ala	Asn	Val	Ile	Gly
ATG	GAC	CTT	ATG	CTC
Met	Asp	Leu	Met	
ACT	CTC	GTT Val	GCC Ala	AAT Asn
CCT	GCA	GGT	TCC	TTT
	Ala	Gly	Ser	Phe
CGT	GGT	ATT	TTA	AGC
Arg	Gly	Ile	Leu	
CCG	TTC	GAG	TCT	AAG
	Phe	Glu	Ser	Lys
CCT	ATC Ile	AGG Arg	CCT	ATT Ile
ATC	GTA	CCT	ACG	AAC
Ile	Val		Thr	Asn

48	96	144	192	240	288	336
CTC	TTA Leu	CTC	GTT Val	TGT Cys	GAT Asp	CAG Gln
AAG	CGA	AAT	ACC	TCT	ATG	TTT
Lys	Arg	Asn	Thr	Ser	Met	Phe
TTC	TCC	TAC	TCC	TAC	TTT	GAG
Phe	Ser	Tyr	Ser	Tyr	Phe	Glu
CTC	ATC	CAA	GGC	GAT	AAG	TTA
	Ile	Gln	Gly	Asp	Lys	Leu
CAT	GAG	CTC	TTT	GTT	CAG	TCT
His	Glu	Leu	Phe	Val	Gln	Ser
ACT Thr	ACA Thr	CAT His	ATC Ile	CTC	TAT Tyr	TCA
ATT	GTC	CTT	GCT	TAT	AAG	GAG
Ile	Val	Leu	Ala	Tyr	Lys	Glu
CTC	TTA Leu	TGC	TTA Leu	GTT Val	GTT Val	AAT Asn
TAC	GTT	ATT	GCT	TCT	CAG	TTC
Tyr	Val	Ile	Ala	Ser	Gln	
CAC	GCG	CAG	TCT	AGA	CTT	GAT
His	Ala	Gln	Ser	Arg	Leu	Asp
TAC Tyr	ATG Met	TAC Tyr	CTC	CCC	AGT Ser	GAA Glu
666	TTA	CTT	TTT	CGT	GAG	ATT
61y	Leu	Leu	Phe	Arg	Glu	Ile
CTG	CCA	GAT	ATC	AGT	CCG	TTG
Leu	Pro	Asp	Ile	Ser	Pro	
AAA	GTT	GAC	TTC	ATG	CCT	AAG
Lys	Val	Asp		Met	Pro	Lys
CTT Leu	TTG Leu	ACA Thr	GCT Ala	ATC Ile	CTT	TCT
AAG Lys	TGT	ACA Thr	GTT Val	TAC	TAT TYr	CAT His

FIG. 10A

384	432	480	528	576	622
CCT Pro	CGT Arg	GAG Glu	TGT	AAG Lys	ъ
CTC	GCT	TTC	AAT	AAC	ATT
	Ala	Phe	Asn	Asn	Ile
$\mathtt{TAT}$	GCG	CTT	GTG	GTT	GGC
	Ala	Leu	Val	Val	G1y
ACT	ATG	AAG	GTT	ATT	666
Thr	Met	Lys	Val	Ile	G1y
GAG	ATG	GAT	TTG	ATG	CTG
Glu	Met	Asp	Leu	Met	
GAA	ACG	CTT	GTG	GCT	AAC
Glu	Thr	Leu	Val	Ala	Asn
GGA	CCT	GCT	GGT	TCA	TTT
Gly		Ala	Gly	Ser	Phe
TTA	AGG	GGT	ATT	TTG	AGT
Leu	Arg	Gly	Ile		Ser
$_{\rm G1Y}^{\rm GGT}$	CCG	TTT	GAT	TCG	AAG
	Pro	Phe	Asp	Ser	Lys
TCT Ser	CCT	ATG Met	AGG Arg	CCT	GTT Val
CGT	ATC	GTA	CCT	ACA	AAT
Arg	Ile	Val		Thr	Asn
GAA Glu	TGT Cys	CAG Gln	AAC Asn	CCT	$ ext{GGG}$
CTT	CAT	GAG	ATT	AAT	AGA
Leu	His	Glu	Ile	Asn	Arg
ATT	TTA	GCT	AAG	TTT	CTT
Ile	Leu	Ala	Lys	Phe	Leu
AAG	GCT	GAA	ACC	TTG	AAG
Lys	Ala	Glu	Thr		Lys
AGG	GAA	GAG	AAT	AGC	$\mathtt{TAT}$
Arg	Glu	Glu	Asn	Ser	

FIG. 10B

48	96	144	192	240	288	336
CTC	TTA Leu	AAT Asn	ACA Thr	TCA Ser	ATG Met	TTC
AAG Lys	CGG Arg	TTC Phe	TTC Phe	$\mathtt{TAC}$	TTC Phe	GAG Glu
TTT Phe	TCC Ser	CAG Gln	GGA Gly	GAC Asp	ACA Thr	CTT Leu
CTT Leu	GTC Val	CTC Leu	TTC Phe	CTC Leu	CAG Gln	TCG Ser
CAC His	AAT Asn	CAG Gln	ATT Ile	CTC	TAC	TCG Ser
TCT Ser	ACG Thr	CTC	TCC Ser	$ extsf{TAC}$	AGC Ser	GAG Glu
ATT Ile	TTC Phe	TCT Ser	GTC Val	GTT Val	GTT Val	GAC
CTG	CTG	CTC	ACC Thr	TCC Ser	AAA Lys	TTC
TAC TYr	GTT Val	GAT	ATT Ile	AGA Arg	CTC	GAT Asp
CAC His	GCG Ala	CTC Leu	TTC	CCT	AAT Asn	GAA Glu
TAT TYr	ATG Met	TGT Cys	TTC	CGA Arg	TCG Ser	ATT Ile
TGG	TTA Leu	CTC Leu	ATC Ile	TCC Ser	CCG	CTG
TTA Leu	CCT	CAG Gln	TTC Phe	ATG Met	CCG	AAA Lys
AAG Lys	GTT Val	AAC' Asn	GGA Gly	TTC	CTC Leu	TCT Ser
CTT Leu	TTG	CTA Leu	GTC Val	ATC Ile	TAC	CAT His
AAG Lys	TTG Leu	AGC	CTC	GTT Val	TGT Cys	AAT Asn

FIG. 11A

384	432	480	528	576	625
CTC	GCG	TTC	AAC	AAC	ATG G
	Ala	Phe	Asn	Asn	Met>
TAC (TYT :	GCG (	CTC	GTG	GTG Val	GGC
ACT	GCG	AAT	GTG	ATT	$_{\rm GGT}$
Thr	Ala	Asn	Val	Ile	
GAG	ATG	GAC	GTG	ATG	CTC
Glu	Met	Asp	Val	Met	
GAA	ACT	CTC	GTT	GCC	AAT
Glu	Thr		Val	Ala	Asn
GGC	CCG	GCA	GGT	TCC	ттт
Gly	Pro	Ala	Gly	Ser	Phe
CTC	CGT	$_{\rm G1y}^{\rm GGT}$	ATT	TTA	AGC
Leu	Arg		Ile	Leu	Ser
$_{\rm GGT}$	CCG	TTC Phe	GAG Glu	TCT Ser	AAG Lys
TCC Ser	CCG	ATC Ile	AGG Arg	CCT	GTG Val
CGA	ATC	GTA	CCT	ACG	AAC
Arg	Ile	Val		Thr	Asn
AAG	TGC	CAG	GAC	CCG	GGA
Lys	Cys	Gln	Asp		Gly
CTG	CAC	GAG	ATC	AAC	AGA
	His	Glu	Ile	Asn	Arg
ATC	ATC	TCG	AAA	TTT	CTT
Ile	Ile	Ser	Lys	Phe	
AAG Lys	TCT Ser	GAA Glu	ACC	TTG	AAG Lys
CGG Arg	GAA Glu	GAG Glu	AAT	AGC	$\mathtt{TAT}\\ \mathtt{TYr}$
CAG Gln	CCG	CGT Arg	GAG	TGC	AAG Lys

FIG. 111

56 104 152 200 248	296	344
GTTCATTGAT TTGTTTGAGA CTCTGTTGCA GAAATCTCCA C ATG GAT GAT GAA TCC  Met Asp Asp Glu Ser  GTT AAT GGA GGA TCC GTA CAG ATC CGG ACC CGA AAG TAC GTC AAG CTG  Val Asn Gly Gly Ser Val Gln Ile Arg Thr Arg Lys Tyr Val Lys Leu  GGT TAT CAC TAC CTG ATT TCT CAC CTT TTT AAG CTC TTG TTG GTT CCT  Gly Tyr His Tyr Leu Ile Ser His Leu Phe Lys Leu Leu Val Pro  TTA ATG GCG GTT CTG TTC ACG AAT GTC TCC CGG TTA AGC CTA AAC CAG  Leu Met Ala Val Leu Phe Thr Asn Val Ser Arg Leu Ser Leu Asn Gln  CTC TGT CTC GAT CTC TCT CTC CAG CTC CAG TTC AAT CTC GTC GGA TTC  Leu Cys Leu Asp Leu Ser Leu Gln Leu Gln Phe Asn Leu Val Gly Phe	ATC TTC TTC ATT ACC GCC TCC ATT TTC GGA TTC ACA GTT ATC TTC ATG Ile Phe Phe Ile Thr Ala Ser Ile Phe Gly Phe Thr Val Ile Phe Met	TCC CGA CCT AGA TCC GTT TAC CTC CTC GAC TAC TCA TGT TAC CTC CCG Ser Arg Pro Arg Ser Val Tyr Leu Leu Asp Tyr Ser Cys Tyr Leu Pro

FIG. 12A

392	440	488	536	584	632	680
AAA Lys	ATC Ile	ATC Ile	TCG Ser	AAA Lys	TTT Phe	CTT Leu
TCT Ser	AAG Lys	TCT Ser	GAA Glu	ACC Thr	TTG Leu	AAG Lys
CAT His	CGG Arg	GAA Glu	GAG Glu	AAT Asn	AGC Ser	TAT Tyr
AAT Asn	CAG Gln	CCG Pro	CGT Arg	GAG Glu	TGC Cys	AAG Lys
ATG Met	TTC	CTC	GCG Ala	TTC Phe	AAC Asn	AAC Asn
TTC	GAG Glu	TAC	GCG Ala	CTC	GTG Val	GTG Val
ACA Thr	CTT Leu	ACT	GCG Ala	AAT Asn	GTG Val	ATT Ile
CAG Gln	TCG Ser	GAG Glu	ATG	GAC Asp	GTG Val	ATG Met
TAC Tyr	TCG Ser	GAA Glu	ACT	CIC	GTT Val	GCC Ala
AGC	GAG Glu	GGC G1y	CCG	GCA Ala	GGT Gly	TCC Ser
GTT Val	GAC Asp	CTC Leu	CGT Arg	GGT Gly	ATT Ile	TTA Leu
AAA Lys	TTC Phe	GGT GLY	CCG	TTC	GAG Glu	TCT Ser
CTC Leu	GAT Asp	TCC Ser	CCG	ATC Ile	AGG Arg	CCT
AAT Asn	GAA Glu	CGA Arg	ATC Ile	GTA Val	CCT	ACG Thr
GCG Ala	ATT Ile	AAG Lys	TGC	CAG Gln	GAC	CCG
NCG	CTG	CTG	CAC His	GAG Glu	ATC Ile	AAC Asn

FIG. 12B

r AGG GCT s Arg Ala c CAT AGA l His Arg l Asn Trp g TTT AGG l Phe Arg r CGA AAA c Arg Lys c Aga TCT s Gly Ser s Gly Ser s Gac TTG		GCT Ala AGA Arg Trp AAA Lys Lys TrT Ser TrG
ATG GGA Met Gly TTA CAG Leu Gln ATC ACT Ile Thr Ile Thr CCT CGT ASN CYS ASN CYS ASN CYS ASN CYS CCT CGT CCT CGT AND ACT CAT Thr His	AGG Arg CAT His AAT ASD CGA CGA CGA GGA GGA GGA ASD	
GTG AAG AGC TTT AAC CTC GGA GG Val Lys Ser Phe Asn Leu Gly Gl Ala Val Asp Leu Ala Asn Asp Ila Ala Leu Val Val Ser Thr Glu As Ala Leu Val Val Ser Thr Glu As Asn Asn Lys Ala Met Leu Ile PhTCC GCG GTT CTG CTT TCG AAC AAS Ser Ala Val Leu Leu Ser Asn Lys Tyr Lys Leu Val His Thr Val Ala Ala Phe Asn Cys Val Tyr Gln Gla Ala Phe Asn Cys Val Tyr Gln Gla Ala Phe Asn Cys Val Tyr Gln Gla	AAG AGC TTT AAC CTC GGA GGA ATG GGA Lys Ser Phe Asn Leu Gly Gly Met Gly GTT GAT CTC GCT AAT GAC ATT TTA CAG Val Asp Leu Ala Asn Asp Ile Leu Gln Leu Val Val Ser Thr Glu Asn Ile Thr Leu Val Val Ser TTG ATT CCT AAT TGC ASN Lys Ala Met Leu Ile Pro Asn Cys ASN Lys Ala Met Leu Ser Asn Lys Pro Arg Lys Leu Val His Thr Val Arg Thr His Lys Leu Val His Thr Val Arg Thr His TTC AAC TGT GTG TTC CAA GAA GAA GAA GAA GAA GAA GAA GAA GA	AAG AGC TTT AAC CTC GGA GGA ATG GGA LLys Ser Phe Asn Leu Gly Gly Met Gly GTT GAT CTC GCT AAT GAC ATT TTA CAG Val Asp Leu Ala Asn Asp Ile Leu Gln Leu Val Val Ser Thr Glu Asn Ile Thr Leu Val Val Ser TTR ATT CCT AAT TGC ASN Lys Ala Met Leu Ile Pro Asn Cys Ala Val Leu Ser Asn Lys Pro Arg Lys Leu Val His Thr Val Arg Thr His Lys Leu Val His Thr Val Arg Thr His TTC AAC TGT GTG TTC CAA GAA GAA GAA GAA GAA GAA GAA GAA GA
GGA GG GGA GG GGAC AJ GGAC AZ GGU AS GGU AS AAC AZ ASD LJ CGAA GZ GIA GJ GGA GG	GGA ATG GGA Gly Met Gly ATT TTA CAG Ile Leu Gln ASN Ile Thr ASN Ile Thr ASN CCT CGT Lys Pro Arg Lys Pro Arg CGG ACT CAT Arg Thr His Arg Thr His Arg Thr His	GGA ATG GGA Gly Met Gly ATT TTA CAG Ile Leu Gln AAC ATC ACT ASN Ile Thr AAG CCT CGT Lys Pro Arg Lys Pro Arg CGG ACT CAT Arg Thr His Arg Thr His
GGA GBC GAC ASP GLU ATT Ile AAC ASN GTA Val	GGA GGA ATG GGA G1y G1y Met G1y GAC ATT TTA CAG ASP Ile Leu Gln G1u ASN Ile Thr Glu ASN Ile Thr G1u ASN Ile Thr G1u ASN Ile Thr G1u ASN Ile Thr G1u ASN Ile Thr ATT CCT AAT TGC Ile Pro ASN CYS AAC AAG CCT CGT ASN Lys Pro Arg ASN Lys Pro Arg CTA CGG ACT CAT Val Arg Thr His Val Arg Thr His	GGA GGA ATG GGA G1y G1y Met G1y GAC ATT TTA CAG ASP Ile Leu Gln G1u ASN Ile Thr Glu ASN Ile Thr G1u ASN Ile Thr G1u ASN Ile Thr G1u ASN Ile Thr G1u ASN Ile Thr ATT CCT AAT TGC Ile Pro ASN CYS AAC AAG CCT CGT ASN Lys Pro Arg ASN Lys Pro Arg CTA CGG ACT CAT Val Arg Thr His Val Arg Thr His
	ATG GGA Met Gly TTA CAG Leu Gln ATC ACT Ile Thr Ile Thr CCT CGT ASN CYS ASN CYS ASN CYS ASN CYS CCT CGT CCT CGT AND ACT CAT Thr His	ATG GGA Met Gly TTA CAG Leu Gln ATC ACT Ile Thr Ile Thr CCT CGT ASN CYS ASN CYS ASN CYS ASN CYS CCT CGT CCT CGT AND ACT CAT Thr His
AGG Arg CAT His Asn TTT Phe CGA GGA GGA GGA GIY		GCT ALA ACA ACG ACG ACG ACG ACG ACG ACG ACG TrCT Ser TrCT Ser Lys

FIG. 12C

1064	1112	1160	1208	1256	1304	1352
GAA Glu	ATA Ile	TTC	CTT Leu	GAT Asp	TCT	TGG
GGA	CCA	TTG	AAG	ATC	GCT	ATT
G1y	Pro	Leu	Lys	Ile	Ala	Ile
GCT	CTT	AGA	TTC	GTG	GAG	TCT
Ala		Arg	Phe	Val	Glu	Ser
ATA	GTT	AAG	GAT	GCC	GTG	AGC
Ile	Val	Lys	Asp	Ala	Val	Ser
TCT Ser	CTG Leu	GCA Ala	CCG	AGA Arg	CAT His	TCG
ATG	CCT	GTT	ATA	GGT	AAA	TCA
Met	Pro	Val	Ile	Gly	Lys	Ser
CTA Leu	$_{\rm GGT}$	TTT Phe	$\mathtt{TAC}$	GGA Gly	CCA Pro	ACT Thr
GAC	TTG	ACT	CCT	GCA	TTG	AAC
Asp	Leu	Thr	Pro	Ala		Asn
AAA	ACT	GCG	AAG	CAC	CTA	GGA
Lys	Thr	Ala	Lys	His	Leu	Gly
TCT	ACC	ATT	AAG	ATT	AAG	TTT
Ser	Thr	Ile	Lys	Ile	Lys	Phe
TTG	ATC	TTC	AAG	TGT	TTA	AGA
Leu	Ile		Lys	Cys	Leu	Arg
TCT Ser	AAT Asn	CTG	AAG Lys	TTC	AGT Ser	CAT His
GTT	ACA	ATT	AAG	CAT	AAG	TTG
Val	Thr	Ile	Lys	His	Lys	
GGA	AAG	CAG	AAG	GAT	GAG	ACA
Gly	Lys	Gln	Lys	Asp	Glu	Thr
ACC	CTA	GAG	GCC	TTT	CTA	ATG
Thr	Leu	Glu	Ala	Phe	Leu	Met
AAA	GCT	AGC	AGT	GCC	GAA	AGA
Lys	Ala	Ser	Ser	Ala	Glu	Arg

FIG. 12D

1400	1448	1496	1545	1605	1665	1704
TAT GAA TTA GCT TAC ACA GAA GCT AAA GGA AGA ATG AGA AAA GGG AAT 1. Tyr Glu Leu Ala Tyr Thr Glu Ala Lys Gly Arg Met Arg Lys Gly Asn	CGA GTT TGG CAG ATT GCT TTT GGA AGC GGC TTT AAG TGT AAC AGC GCG 14 Arg Val Trp Gln Ile Ala Phe Gly Ser Gly Phe Lys Cys Asn Ser Ala	GTT TGG GTG GCT CTT CGT GAT GTC GAG CCC TCG GTT AAC AAT CCT TGG 1, Val Trp Val Ala Leu Arg Asp Val Glu Pro Ser Val Asn Asn Pro Trp	GAA CAT TGC ATC CAT AGA TAT CCG GTT AAG ATC GAT CTC TGATTTCAGC Glu His Cys Ile His Arg Tyr Pro Val Lys Ile Asp Leu	TTAACCGGTA AAATTGGTCT GTACATATAT TTACCACTGA GTAAAGACAT CAGTTAATGA 10	TTTGTTGTTA CTCAATTGGG CTAAGTGTAT TATTATATGT GTTGTATATA ATAAAGGTAG 1	AACGTAAATT TACTAAGAAA AAAAAAAA AAAAAAAAA

FIG. 12E

47	95	143	191	239	287	335	
ACC Thr	GGA Gly	TAT Tyr	GTT Val	CTC	ATC Ile	TTA Leu	
ATA A Ile I	GCC Ala	TCA Ser	ACC Thr	$\mathtt{TAC}$	GGT Gly	CCT Pro	
GTC A Val I	CTC	$\mathtt{TAT}$	TTC Phe	GTT Val	GCT Ala	GAT Asp	
TAC G TYr V	ATC Ile	TTC Phe	GGC G1Y	CCG Pro	AGC Ser	TCT Ser	
CAT T His T	GGG G1y	CAC His	TTT Phe	AAA Lys	CTT Leu	AAA Lys	
TAC C TYr H	ACG Thr	CAC His	CTC	CCC Pro	CAT His	AGA Arg	
CTT 1 Leu 1	CTG Leu	CTC Leu	CTA Leu	CGA Arg	CAA Gln	ATA Ile	
CTC C	CCA Pro	GAT ASD	ACC Thr	ANC	CCA Pro	CAA Gln	
AAA C Lys I	TTC Phe	AAC Asn	TTA Leu	GTA Val	CCA Pro	$ ext{TAT}$	
GTA A Val I	TTC Phe	ACA Thr	ACC Thr	TTC Phe	CTT Leu	TTT Phe	
AAC G Asn V	TGT Cys	ACC Thr	ATA Ile	TAC Tyr	TAC	ATC Ile	
GTG A Val A	CTC Leu	CTT Leu	CTT Leu	CTC Leu	TGC	GAA Glu	
TCT G	AAC Asn	CGT Arg	AAN	GTT Val	TCC Ser	ATG Met	
ACG T Thr S	TTC Phe	TCT Ser	CAC His	TCG Ser	TAC Tyr	ACC Thr	
ATG A Met 1	TTT Phe	GGC G1y	CAA Gln	GGT Gly	GAC Asp	AAG Lys	
Α. Α. ΣΙ	AAC	AAA ys	TC	TT.	irr 7a1	CT	

FIG. 13A

383	431	479	527	575	623	671
AAG	GGA	GAG	AAC	ATG	AAG	AGT
Lys	Gly	Glu	Asn	Met	Lys	Ser
AGA	GAG	GAA	AAC	AGC	TCC	TGC
Arg	Glu	Glu	Asn	Ser	Ser	
TTG	CCC Pro	CGT Arg	GAG Glu	TCA	ACT	GGT Gly
TTC	GGC	GCG	TTC	AAC	AAT	ATG
Phe	Gly	Ala	Phe		Asn	Met
GAT	TAC	TCG	CTA	GTG	GTT	GGA
Asp	Tyr		Leu	Val	Val	Gly
CIT	ACC Thr	GCG Ala	AAT Asn	GTG Val	GTA Val	GGA
TCT	GAA	TTA	AAA	CTT	ATG	CTT
Ser	Glu	Leu	Lys	Leu	Met	Leu
TCT Ser	GAT	AAT Asn	CTA Leu	ATA (	GCG Ala	AAT Asn
TCG	GGC	AAG	GCG	GGT	TCC	TTT
Ser	Gly	Lys	Ala	Gly		Phe
GAT	CTA	AGG	GGT	ATT	TTA	AGC
Asp	Leu	Arg	Gly	Ile	Leu	Ser
GAT	GGT	CCG	AAC	GAG	TCG	AAA
Asp	G1y		Asn	Glu	Ser	Lys
TTA Leu	TCA Ser	CCT	ATC Ile	AAA Lys	CCT	ATC Ile
GCA Ala	CGT	ATT Ile	GTA Val	CCT	ACT Thr	AAC Asn
GTG	GAG	GAG	CAA	AAC	CCG	AGC
Val	Glu	Glu	Gln	Asn	Pro	Ser
AAC GTG	CAA	TTT	GAG	GTT	AAT	CGA
Asn Val	Gln	Phe	Glu	Val	Asn	Arg
CGA Arg	ATT Ile	CTG	ACG Thr	AAA Lys	TTT Phe	CIC

FIG. 13B

719	767	815	863	911	949	1007
CAT	AAC	TTC	CGA	GGA	AGC	GGG
His	Asn		Arg	Gly	Ser	G1y
GTT	CAA	TTG	GAT	ACC	GAT	GCC
Val	Gln	Leu	Asp	Thr	Asp	Ala
CAT	ACT	TGC	GGG	CAT	GAT	GTT
His	Thr	Cys		His	Asp	Val
TTG	ATC Ile	AAT Asn	CCG	ACG Thr	GAA Glu	GTT Val
TTG	AAC	TCG	AAG	CGA	GAA	ACC
Leu	Asn	Ser	Lys		Glu	Thr
GAC	GAG	GTT	AAC	GTT	CAA	ATA
Asp	Glu	Val	Asn	Val		Ile
AAA	ACA	ATG	TCC	ACG	CGG	GAC
Lys	Thr	Met	Ser	Thr	Arg	Asp
GCT	AGC	ATG	CTC	CAC	GTG	AAA
Ala	Ser	Met	Leu	His	Val	Lys
CTA	GTG	TCC	CTG	GCT	TGT	TCA
Leu	Val	Ser	Leu	Ala	Cys	Ser
GAT	GTG	AGA	ATT	CTA	GGA	TTG
Asp	Val		Ile	Leu	Gly	Leu
ATT	CTT	AAC	GCG	AAG	TTT	AGT
Ile	Leu	Asn	Ala	Lys	Phe	Ser
GCC	GCT	GAT	GCA	TAC	TCT	GTT
Ala	Ala	Asp	Ala	TYT	Ser	Val
ATC Ile	TAT Tyr	$_{\rm GLY}^{\rm GGT}$	$\tt GGG$	AAG Lys	AAG Lys	GGA Gly
GTT	ACA	ACC	$_{\rm G1y}^{\rm GGT}$	TCC	GAC	ACC
Val	Thr	Thr		Ser	Asp	Thr
GGT GTT	AAC	$\mathtt{TAT}$	GTC	CGG	GAC	AAA ACC
Gly Val	Asn		Val	Arg	Asp	Lys Thr
GCT	AAA Lys	ATT Ile	CGT Arg	AGA Arg	GCT Ala	$_{\rm G1y}^{\rm GGT}$

FIG. 13C

1055	1103	1151	1199	1247	1295	1343
CCT	CTA	GCA	GTG	AGA	TAT	AAA
Pro	Leu	Ala	Val	Arg	Tyr	Lys
CTT Leu	AAA Lys	CTT	GAT Asp	TCA Ser	TGG	AAT Asn
GTT	AAG	AAA	ATA	GCA	ATT	GGT
Val	Lys	Lys	Ile	Ala	Ile	Gly
TTG	GCC	TTC	GTG	GAG	TCA	AAA
Leu	Ala	Phe	Val	Glu	Ser	Lys
CCG	GTA	GAT	GCC	GTG	AGT	AAG
	Val	Asp	Ala	Val	Ser	Lys
GGT	TTC	CCG	AGA	GAT	TCT	ATG
Gly	Phe		Arg	Asp	Ser	Met
TTG	ACA	GTG	GGT	ATA	TCG	AGG
Leu	Thr	Val	Gly	Ile	Ser	Arg
ACA Thr	GTT Val	TAC	GGA Gly	CCG	ACA Thr	GGA Gly
ACA	GTC	TAT	GCG	TCG	AAT	AAA
Thr	Val	TYY	Ala	Ser	Asn	Lys
ATA	TTT	CAC	CAT	CTA	666	CCA
Ile	Phe	His	His	Leu		Pro
AAC	CTT	AAA	ATT	GGG	TTT	GAG
Asn	Leu	Lys	Ile	G1Y	Phe	Glu
AAA	ATC	ATC	TGT	TTA	AGA	ATA
Lys	Ile	Ile	Cys	Leu	Arg	Ile
CAG	AAA	AAG	TTC	AAC	CAT	TAC
Gln	Lys	Lys	Phe	Asn	His	Tyr
GTT	GAA	GAT	CAT	AAG	TTA	GCA
Val	Glu	Asp	His	Lys	Leu	Ala
ACG	AGC	AAA	GAT	GAG	ACA	TTA
Thr	Ser	Lys	Asp	Glu	Thr	
ATA Ile	CTG	TTA	GTA Val	TTA	TCA	GAA Glu

FIG. 13L

1391 1439 1487 1537 16 1597 AA 1657	
ATA GCT GGT GGG TCA GGT TTT AAG TGT AAT AGT GCG GTT Ile Ala Gly Gly Ser Gly Phe Lys Cys Asn Ser Ala Val TTA CGC AAT GTC GAG GCT TCA GCT AAT AGT CCT TGG GAA Leu Arg Asn Val Glu Ala Ser Ala Asn Ser Pro Trp Glu CAC AAA TAT CCG GTT CAA ATG TAT TCT GGT TCA TCA AAG His Lys Tyr Pro Val Gln Met Tyr Ser Gly Ser Ser Lys CCT GTC CAA AAC GGT CGG TCC TAATTTATGT ATCTCAAATG Pro Val Gln Asn Gly Arg Ser CTTTCTCTTT TTTTTTTTTTTTTTTTTTAGTT ATAATTTAAT GGTTACGATG GTCCTTATAAA ATAAAGAATA CATGGGTGTT ACTAGTATAA AAAAAAAAAA	
GGG TCA GGT TTT GLY Ser Gly Phe GTC GAG GCT TCA Val Glu Ala Ser CCG GTT CAA ATG Pro Val Gln Met ASn Gly Arg Ser TTTTTTTT TTTTTT TTTTTTTTTTTTTTTTTTT	
GGT GGG TCA GLY GLY Ser AAT GTC GAG ASN Val GLU TYT PTO Val CAA AAC GGT GLN ASN GLY TT TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	
ATA GCT GGT GGG TCA G Ile Ala Gly Gly Ser G Leu Arg Asn Val Glu A His Lys Tyr Pro Val G Pro Val Gln Asn Gly A CTTTCTCTTT TTTTTTTTCT GTCGTTATAA ATAAAGAATA	
GCT TGC CAA Ala Cys Gln TGG GTC GCT Trp Val Ala His Cys Ile TCA GAG ACT Ser Glu Thr ATGTTGTCCA C	AAAAAA

FIG. 13E

51	66	147	195	243	291	339
G GCA g Ala	c caa n gln	A AAA 1 Lys	C CTC	'C AAC 'u Asn	c gcc r Ala	C ACC
CAC CGG His Arg	CAA AAC Gln Asn	TAT GTA Tyr Val	CTC CTC Leu Leu	ACA CTC Thr Leu	CTC TCC Leu Ser	TAC TTC Tyr Phe
CCT Pro	AAC Asn	AAA Lys	ATC Ile	TTC Phe	r TTC	GCC Ala
c caa n Gln	c caa n Gln	G CTC g Leu	C TAC u Tyr	T TCC r Ser	T CAT e His	C ACC r Thr
CAA AAC Gln Asn	CAA AAC Gln Asn	GTT CGG Val Arg	GGT CTC Gly Leu	CTC TCT Leu Ser	CGT TTT Arg Phe	CTC TCC Leu Ser
AAC CAASIN G	GAT C ASP G	TCT G	AAC G Asn G	AAA C Lys L	CTC C Leu A	TCT C Ser L
CAT His	TCC	TTA Leu	TCC Ser	GTA Val	CAC His	ATC Ile
3 ACC	a AAC r Asn	r crc e Leu	A AÍC u Ile	A ATC r Ile	c AAC r Asn	c TTA u Leu
A ATG Met	T ACA	AAT TTT Asn Phe	TAC CTA Tyr Leu	GGC ACA	CTC TAC Leu Tyr	GGA CTC Gly Leu
ccccaaca	CAC GTT His Val	CCA AA Pro As	CAT T? His T}	GGC G( G1y G]	CTC CI	ACC G Thr G
_	CCG GTT ( Pro Val 1	CTC Leu	$\operatorname{TAC}$	CTC	TCT Ser	GCT Ala
CTTTCTTCTT	r ccg L Pro	AAT Asn	GGG G1Y	CTC	CTC	CTC
CTJ	GTT Val	AAC	CTT	CCT	GAA Glu	ACA Thr

FIG. 14A

CT CGT GAA ACA TTC ATG GAC CGA TCT CAA	Arg Glu Inr Pne Met Asp Arg ser GAC AAC CTC GCT TTT CAA CAA AAG Asp Asn Leu Ala Phe Gln Gln Lys	3G CAG AAA ACT TAC TTC CCT GAA GCT CTT ly Gln Lys Thr Tyr Phe Pro Glu Ala Leu	CT TGT ATG GAA GAA GCG AGA AAA GAA GCA ro Cys Met Glu Glu Ala Arg Lys Glu Ala	GCT ATA GAC TCT GTT CTT GAG AAA ACC GGT Ala Ile Asp Ser Val Leu Glu Lys Thr Gly	GA ATC CTT GTC GTG AAT TGT AGT TTG TTT ly ile Leu Val Val Asn Cys Ser Leu Phe	TCC GCC ATG ATT GTG AAT AAG TAT AAG CTT Ser Ala Met Ile Val Asn Lys Tyr Lys Leu
					GTG Val	GTG Val
						ATT Ile
						ATG ATG
TIC TIC		T GGG	AT CCT		C GGA .e Gly	CTT TC Leu Se
CAT GTC His Val ATA TGC		GGT CTT Gly Leu	CCC AAT Pro Asn	TTC GGA Phe Gly	GAT ATC Asp Ile	TCA CI Ser Le
CGT CZ Arg Hi TTA A1		TCC G Ser G	CCT C( Pro P)	ATG T Met Pl	AAA G. Lys As	CCG TV Pro S
CCT C Pro A		AGA T Arg S	GTT C Val P	GTT A Val M	CCT A Pro I	ACG C Thr F
		GAA 7 Glu 7	CGT ( Arg <sup>1</sup>	ACT (Thr	AAA ( Lys ]	CCG 7
Arg CCT	Pro GTA Val	75 75	D A	A E	A II	AAT C

771	819	867	915	963	1011	1059
GCT	CCA	TGG	CGT	ACC	GCC	GAA
Ala	Pro		Arg	Thr	Ala	Glu
AGT	CAA	AAC	TTC	CGC	GGA	AAC
Ser	Gln	Asn	Phe	Arg	Gly	Asn
TGT	GTC	TTA	ATC	GAT	AAA	AAC
Cys	Val	Leu	Ile	Asp	Lys	Asn
GGT Gly	CAG Gln	ACC	TGC	TCC Ser	CAC His	GAC Asp
ATG	CTT	ATA	AAC	TCC	ACC	GAA
Met	Leu	Ile	Asn	Ser	Thr	Glu
GGA	CTT	AAC	TCT	CGT	CGT	CGA
Gly	Leu	Asn	Ser	Arg	Arg	Arg
$_{\rm GLY}^{\rm GGT}$	CAG Gln	GAG Glu	CTC	AAC Asn	GTC Val	CAA Gln
CTC Leu	AAA Lys	ACA Thr	CTT Leu	TCA	CCC	TAC Tyr
AAT	GCT	AGC	ATG	CIC	CAC	GTT
Asn	Ala	Ser	Met		His	Val
TAT Tyr	CTC	GTG Val	TCA Ser	CIT	ATC Ile	TGC Cys
AGC	GAT	GTG	CGA	GTA	CTC	GGC
Ser	Asp	Val	Arg	Val		Gly
TTG	ATT	CTA	GAC	GCC	CAG	TTT
Leu	Ile	Leu	Asp	Ala	Gln	Phe
ATT	TCC	GCA	AAC	GCC	TAT	GCA
Ile	Ser	Ala	Asn	Ala	Tyr	Ala
AAC Asn	ATC Ile	TAC	m GGC	GGA Gly	AAA Lys	AAC Asn
GGA	CTT	TCA	TTA	GGA	TCA	GAC
Gly	Leu	Ser	Leu	Gly	Ser	Asp
AGA Arg	GGA Gly	AAC Asn	TAC TYr	ATG	CGT	AAC

FIG. 140

1107	1155	1203	1251	1299	1347	1395
GCA	CTA	GCT	TTC	GTG	GAA	TCA
Ala	Leu	Ala		Val	Glu	Ser
ATG	CCA	GTG	GAT	GCA	ATG	AGC
Met	Pro	Val	Asp	Ala	Met	Ser
CTA	GGA	CTC	CCC	AGA	CAT	AGT
Leu	Gly		Pro	Arg	His	Ser
AAC	CTC	ACA	ATA	$_{\rm G1y}^{\rm GGT}$	TGG	TCG
Asn	Leu	Thr	Ile		Trp	Ser
AAA	ACA	CCA	TAC	GGA	GAG	ACT
Lys	Thr		Tyr	Gly	Glu	Thr
TCT	ACA	TTC	CCT	GCG	TCA	AAT
Ser	Thr	Phe		Ala	Ser	Asn
CTC	ATA	TTT	AAG	CAT	TTA	GGT
	Ile	Phe	Lys	His	Leu	Gly
TCA	AAC	CTG	ATA	ATC	GAT	TTT
Ser	Asn		Ile	Ile	Asp	Phe
GTC	ACA	ATT	AAA	TGC	TTG	CGG
Val	Thr	Ile	Lys		Leu	Arg
GGA	AAG	CAG	AAG	TTC	AAT	AAC
Gly	Lys	Gln	Lys		Asn	Asn
ATC	CTC	GAA	GTC	CAT	AAG	TTA
Ile		Glu	Val	His	Lys	Leu
AAA	GCT	TCC	AAA	GAG	GAG	ACT
Lys	Ala	Ser	Lys	Glu	Glu	Thr
GCC	GAA	ATG	TTC	TTC	ATA	ATG
Ala	Glu	Met	Phe	Phe	Ile	Met
ACC	GGA	CCA	ATC	GCT	GAG	AGG
Thr	Gly	Pro	Ile	Ala	Glu	Arg
GAA	GCC	TTA	AAA	CTA	GAT	TCG
Glu	Ala	Leu	Lys	Leu	Asp	
GAA	ATA	GTC	CGA	AAG	CTT	CCA
Glu	Ile	Val	Arg	Lys	Leu	

FIG. 14I

1443	1491	1539	1587	1641	1701	1732
CTT TGG TAT GAA CTT GCG TAT AGT GAA GCT AAA GGG AGG ATT AAG AGA 1 Leu Trp Tyr Glu Leu Ala Tyr Ser Glu Ala Lys Gly Arg Ile Lys Arg	GGA GAT AGG ACT TGC CAA ATT GCG TTT GGA TCG GGA TTT AAG TGT AAT Gly Asp Arg Thr Cys Gln Ile Ala Phe Gly Ser Gly Phe Lys Cys Asn	AGT GCG GTT TGG AAA GCT TTG AGA ACC ATT GAT CCT ATT GAT GAG AAG Ser Ala Val Trp Lys Ala Leu Arg Thr Ile Asp Pro Ile Asp Glu Lys	AAG AAT CCA TGG AGT GAG ATT CAT GAG TTT CCA GTT TCT GTT CCT Lys Asn Pro Trp Ser Asp Glu Ile His Glu Phe Pro Val Ser Val Pro	AGG ATC ACT CCA GTT ACT TCT AAC TAGTGTTTTT TTTTGGGTC CAACTAGGGA 1 Arg Ile Thr Pro Val Thr Ser Asn	TAATATITGI TATGGTITTIG ITCTTACGTA CGTACTITAA GTGATITAGT CTAAAAATAA 1	ATTGGTTTCA TAAAAAAA AAAAAAAA A

FIG. 14E

48	96	144	192	240	288	336
ATG TAT TTG	TCC ACG TTG	TTC AAT TTA	GGG ACT CTG	TTC TCT TGT	TTC TAT GAG	ACT TTC CAA
Met Tyr Leu	Ser Thr Leu	Phe Asn Leu	Gly Thr Leu	Phe Ser Cys	Phe Tyr Glu	Thr Phe Gln
AAC GCC	CAT CTC	CTT AAG	TTT TTA	GTG GAT	GAG ATT	AAT TTA
Asn Ala	His Leu	Leu Lys	Phe Leu	Val Asp	Glu Ile	Asn Leu
ATC TCC	rrr GCr	GAA CAG	ATG GTG	TAC TTG	ACG AGA	GAT GAT
Ile Ser	Phe Ala	Glu Gln	Met Val	Tyr Leu	Thr Arg	Asp Asp
TAC TTG	GTA GCC Val Ala	CTT TGG Leu Trp	AGC CTT . Ser Leu ]	AAG ATT ' Lys Ile '	ATA TGC Ile Cys	TTT ACC ( Phe Thr i
TAC CAT T	CTA GCA G	GTT CAT C	TGC TCG A	ACG	CGT	AAT
Tyr His T	Leu Ala V	Val His L	Cys Ser S	Thr	Arg	Asn
GTA Val	CTT	CTG	CTC Leu	C CGA CCG r Arg Pro	A AAA GAG u Lys Glu	A ACT GGG u Thr Gly
AAA CTA	GTG CCG	CAA GAT	GTA ACT	ATG AGC	CCG GAA	AAA CTA
Lys Leu	Val Pro	Gln Asp	Val Thr	Met Ser	Pro Glu	Lys Leu
AAG CTT	TTA ATG	ACG ATT	CTG TCA	TAT TTC	TAC AAG	AGA TCG
Lys Leu	Leu Met	Thr Ile	Leu Ser	Tyr Phe	Tyr Lys	Arg Ser

FIG. 15A



384	432	480	528	576	622
CCT Pro	AGA Arg	GAG Glu	TGC	CGG Arg	ტ
TTA	GCT	TTG	AAT	AAT	ATG
Leu	Ala	Leu	Asn	Asn	Met
TAC	GAG	TTG	GTG	GTT	666
Tyr	Glu	Leu	Val	Val	G1y
ACG	GCG	GAA	GTG	GTG	66C
Thr	Ala	Glu	Val	Val	G1y
AAC	ATG	GAT	· CTT	ATG	CTT
Asn	Met	Asp		Met	Leu
cag	TGT	ATC	ATT	GCA	AAC
Gln	Cys	Ile	Ile	Ala	Asn
GGT	CCG	GCG	GGT	TCC	TAT
Gly	Pro	Ala	Gly	Ser	Tyr
TTA Leu	AAT Asn	$_{\rm GGT}$	ATC Ile	CTG	AGT Ser
GGA G1y	CCC Pro	TTC	GAT Asp	TCT Ser	ATA
TCT	CCG	ATG	AAG	CCG	ATC
Ser		Met	Lys	Pro	Ile
AGA	GTT	GTT	CCT	ACG	AAT
Arg	Val	Val		Thr	Asn
GAA	CGG	ATG	AAA	CCG	GGG
Glu	Arg	Met	Lys	Pro	G1y
ATC	CTA	GAG	GTT	AAT	AGA
Ile	Leu	Glu	Val	Asn	Arg
ATT ATC Ile Ile	GTT Val	GCT Ala	GGG	TTC	CTT Leu
AAG AAA	GCC	GAG	ACC	TTG	AAG
Lys Lys	Ala	Glu	Thr	Leu	Lys
AAG	GAG	AAG	AAA	AGC	$\mathtt{TAC}$
Lys	Glu	Lys	Lys	Ser	

FIG. 15]